802.11g Wireless USB Adapter

Model # AWLL3028

User's Manual

Rev. 1.1

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1. Introduction

Thank you for purchasing the 802.11g Wireless USB Adapter. This USB Adapter is designed to comply with IEEE 802.11g Wireless LAN standard and is suitable for notebook computers or desktop computers with a USB 2.0 port.

This Adapter supports WiFi Protected Access (WPA2-PSK and WPA-PSK) data encryption for higher security that protects your wireless network from eavesdropping. Client users are required to authorize before accessing the APs or AP Routers, and the data transmitted through the network is encrypted/decrypted by a dynamically changing secret key, which is much safer than WEP encryption.

1.1 Package Contents

Before you begin the installation, please check the items of your package. The package should include the following items:

- Wireless USB Adapter
- USB Cable
- Quick Installation Guide
- Installation CD (Driver/Utility/Manual)

1.2 Features

- Compatible with IEEE 802.11g high rate standard to provide wireless transmission speeds of up to 54Mbps data rate
- Maximum reliability, throughput and connectivity with automatic data rate switching
- Supports wireless security WPA2, WPA, WPA2-PSK, WPA-PSK, and 64/128-bit WEP
- Integrated microstrip dual diversity antenna for the multi-path environment
- Drivers support Windows 2000, XP and Vista
- Simple user setup & diagnostics utilities
- Power Save & Turbo Mode
- WOL(Wake On Lan) Support
- Software AP function support

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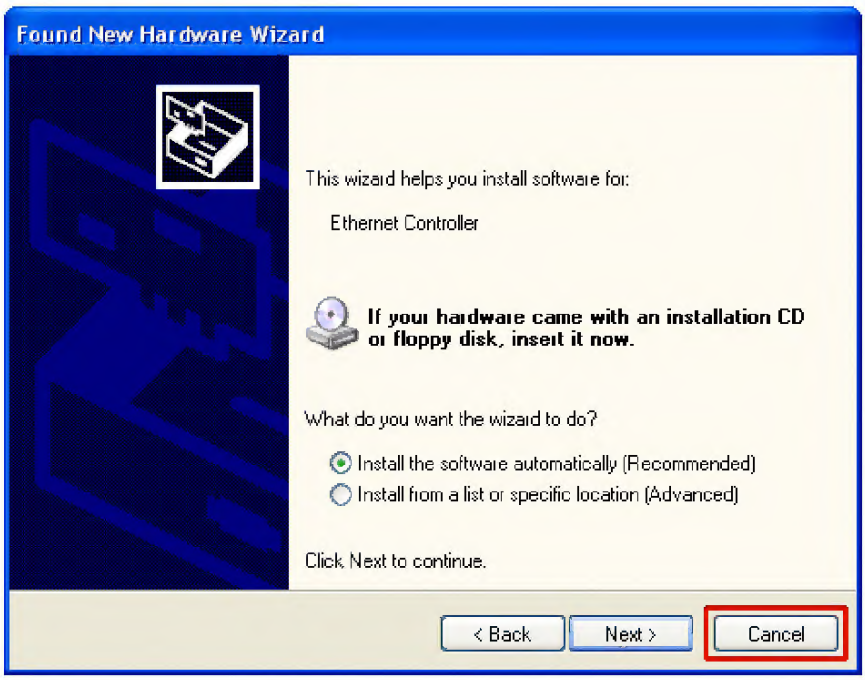
2. Installation

2.1 Install Driver & Utility

This section provides instructions on how to install the **Wireless USB Adapter**. The driver is installed along with the utility.

Insert the USB adapter into an available USB port and turn on your computer.

Windows 2000/XP Users: After turning on the computer, Windows will launch the **Found New Hardware Wizard**. The Found New Hardware Wizard appears differently depending on your operating system.


Found New Hardware Wizard
This wizard helps you install software for:
Ethernet Controller
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

Click **Cancel** to quit the wizard and insert the Installation CD into your CD drive. Skip ahead to **Step 1**

Windows Vista Users: After turning on the computer, Windows will install its built in drivers for this adapter. A popup window will appear telling you that the driver was installed correctly.

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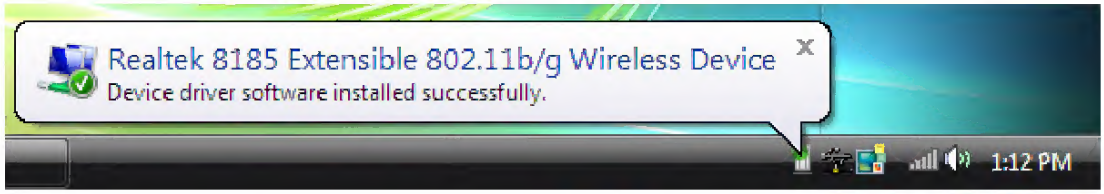

Once you see this message, continue to **Step 1.**

Step 1 The Autorun screen will pop up. Select **Install Utility and Driver** from the menu.

Note: *If the Autorun screen doesn't appear automatically, or if you get a blank white screen, go to* ***Start***, ***Run***, *and type* ***D:\Utility\Setup.exe*** *(where* ***D*** *is the letter of your CD drive) and click* ***OK****.*

Windows Vista Users: At this point, you may get a warning message like the one below. Make sure that you click **Allow** to continue with the installation.

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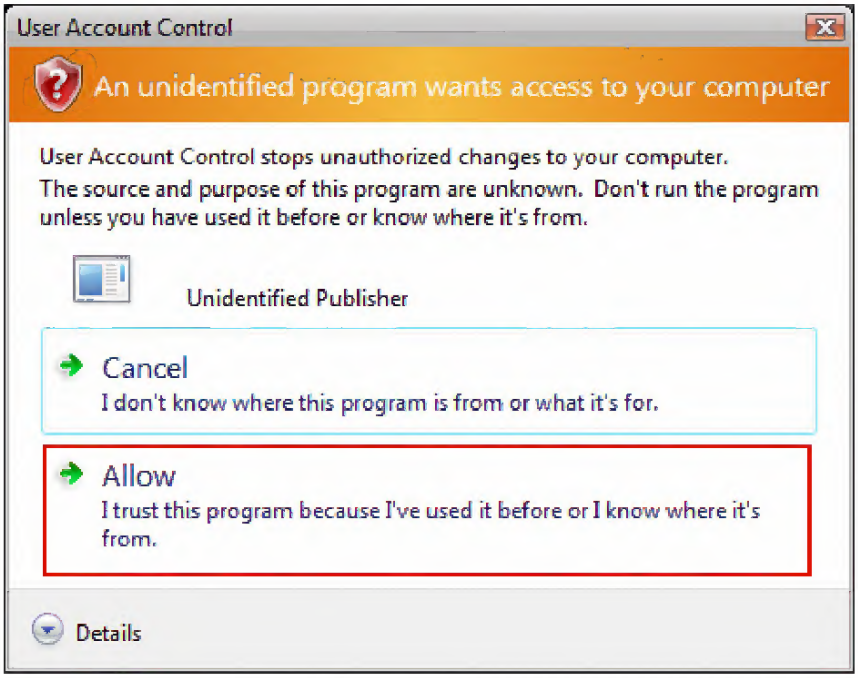
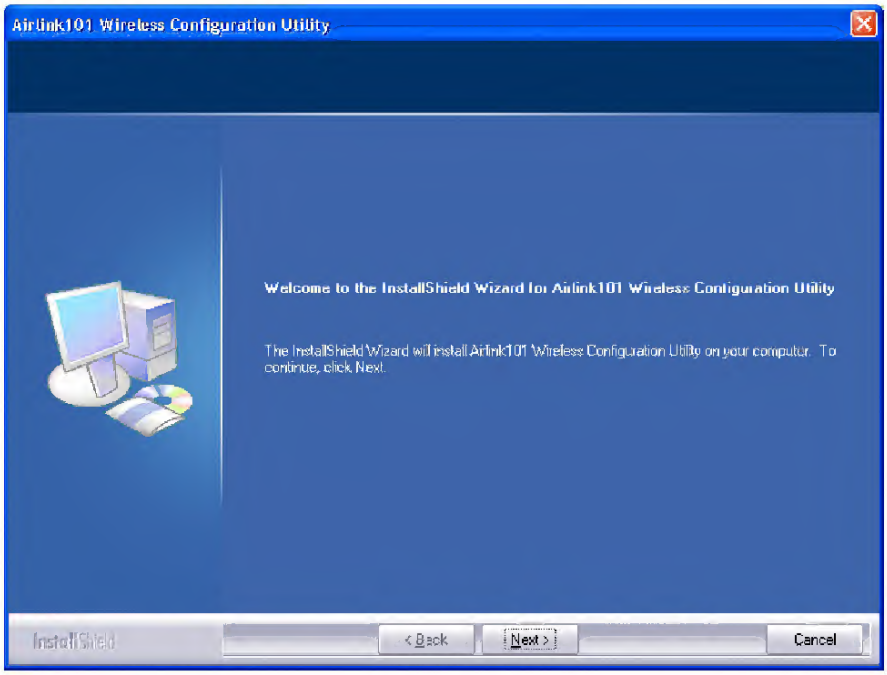

User Account Control
An unidentified program wants access to your computer
User Account Control stops unauthorized changes to your computer.
The source and purpose of this program are unknown. Don't run the program unless you have used it before or know where it's from.
Unidentified Publisher
Cancel
I don't know where this program is from or what it's for.
Allow
I trust this program because I've used it before or I know where it's from.
Details

Step 2 Click **Next** at the welcome screen.


Airlink101 Wireless Configuration Utility
Welcome to the InstallShield Wizard for Airlink101 Wireless Configuration Utility
The InstallShield Wizard will install Airlink101 Wireless Configuration Utility on your computer. To continue, click Next.
InstallShield
< Back
Next >
Cancel

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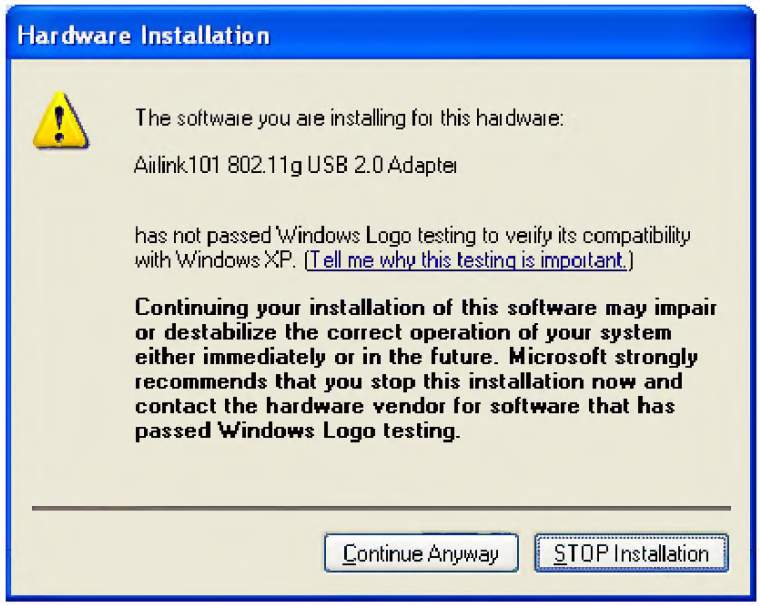
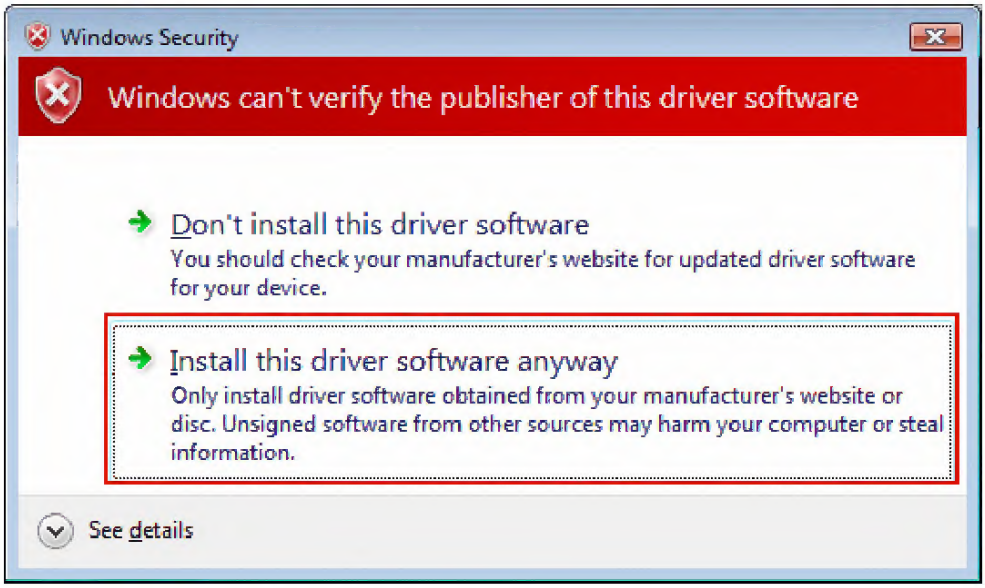
Windows 2000/XP Users: Click **Continue Anyway** at the Windows Logo Screen. (For Windows 2000, click **Yes** at the Digital Signature Not Found prompt).


Hardware Installation
The software you are installing for this hardware:
Airlink101 802.11g USB 2.0 Adapter
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

Windows Vista Users: When the Windows Security box appears click **Install this driver software anyway**.


Windows Security
Windows can't verify the publisher of this driver software
Don't install this driver software
You should check your manufacturer's website for updated driver software for your device.
Install this driver software anyway
Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.
See details

Step 3 Click **Finish** to complete the installation.

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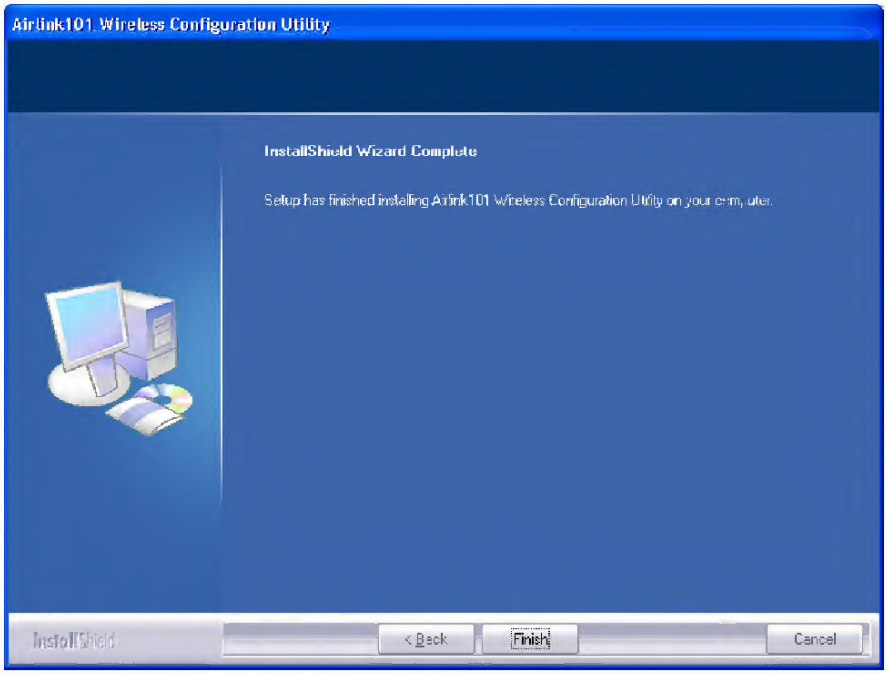

2.2 Verify Driver Installation

To verify if the driver has been installed successfully, please perform the following steps.

Step 1 Right-click on **My Computer** from your desktop and select **Properties**.

Step 2 If you are using Windows XP/2000 select the **Hardware tab**, then click on **Device Manager**.

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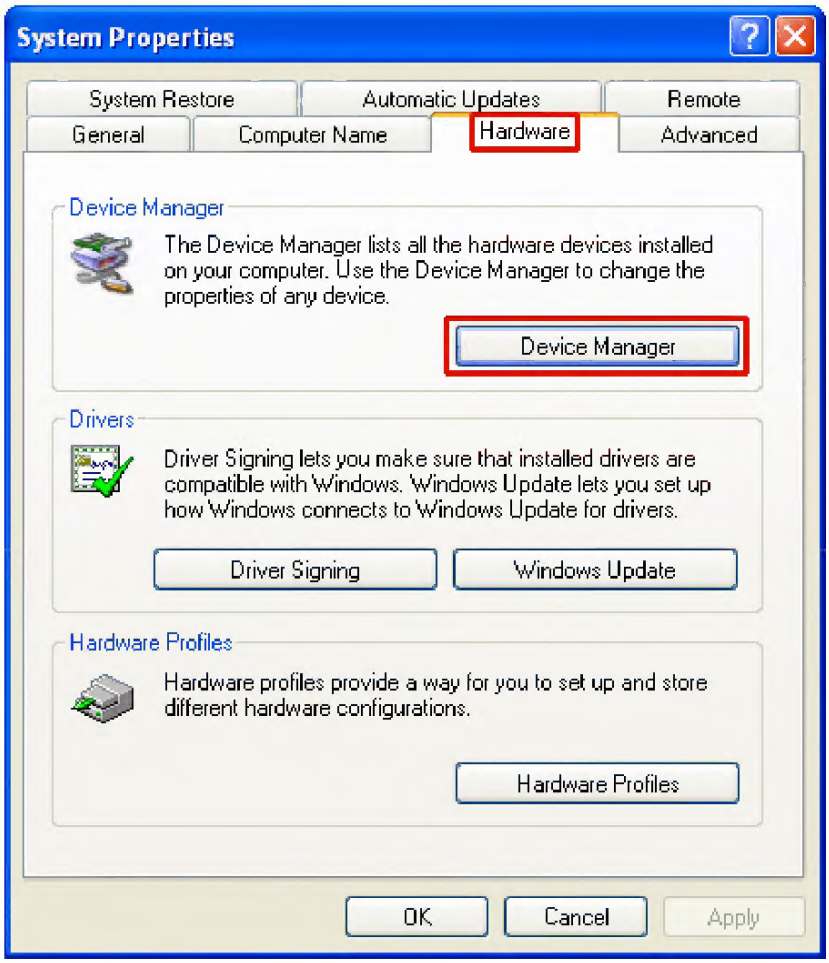
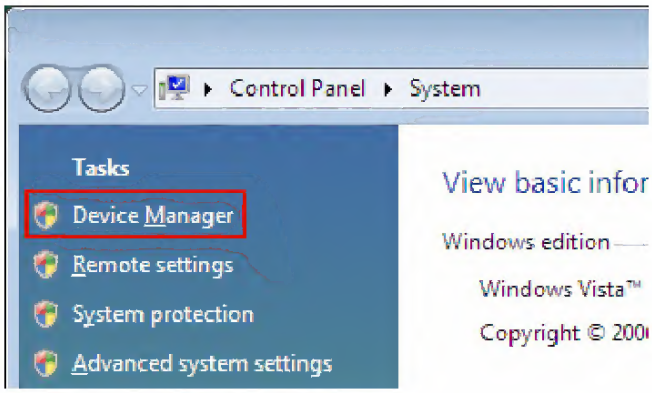

System Properties
System Restore
Automatic Updates
Remote
General
Computer Name
Hardware
Advanced
Device Manager
The Device Manager lists all the hardware devices installed on your computer. Use the Device Manager to change the properties of any device.
Device Manager
Drivers
Driver Signing lets you make sure that installed drivers are compatible with Windows. Windows Update lets you set up how Windows connects to Windows Update for drivers.
Driver Signing
Windows Update
Hardware Profiles
Hardware profiles provide a way for you to set up and store different hardware configurations.
Hardware Profiles
OK
Cancel
Apply

If you are using **Windows Vista**, click on the device manager link on the left side of the screen.



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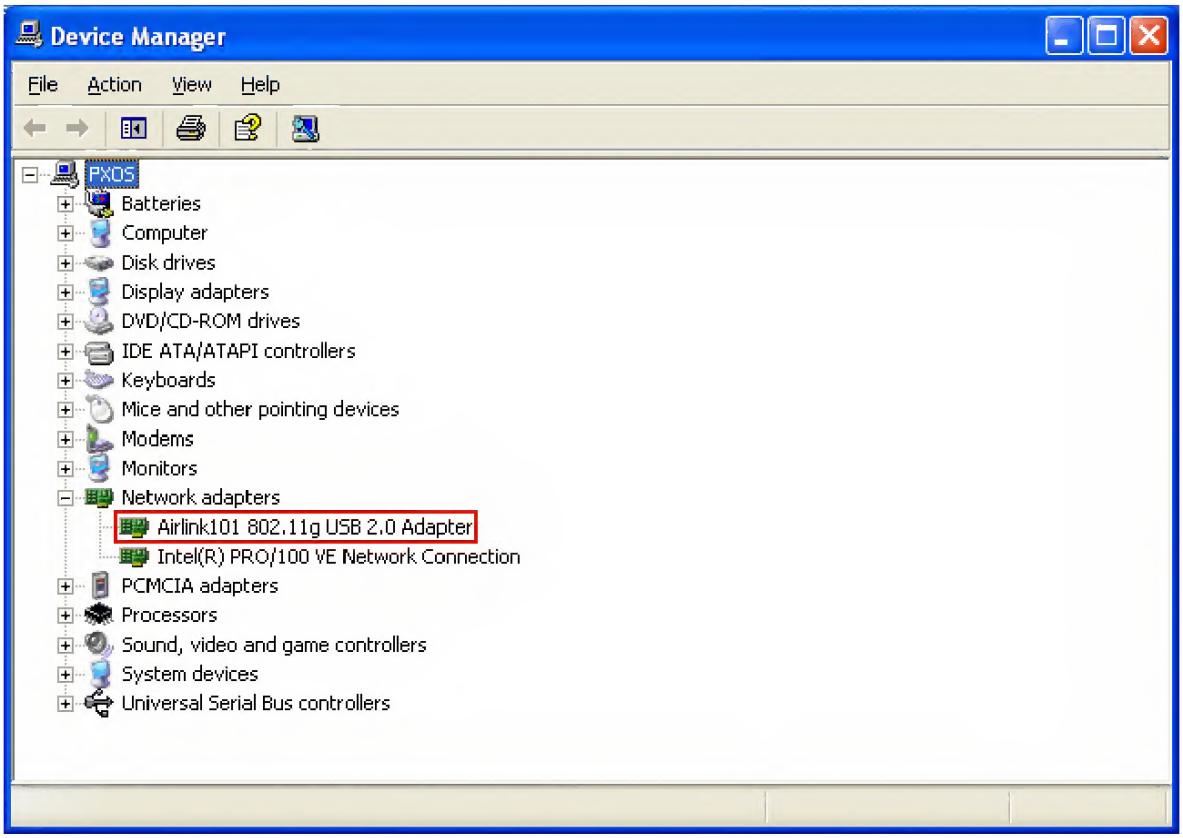
Step 3 Click the "**+**" next to **Network adapters** from the list and verify that **AirLink101 802.11g Wireless USB Adapter** is listed and no yellow question mark is beside it.



If **AirLink101 802.11g Wireless USB Adapter** is not listed, or you see a yellow question mark beside it, you will need to reinstall the driver.

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3. Configuring the Adapter

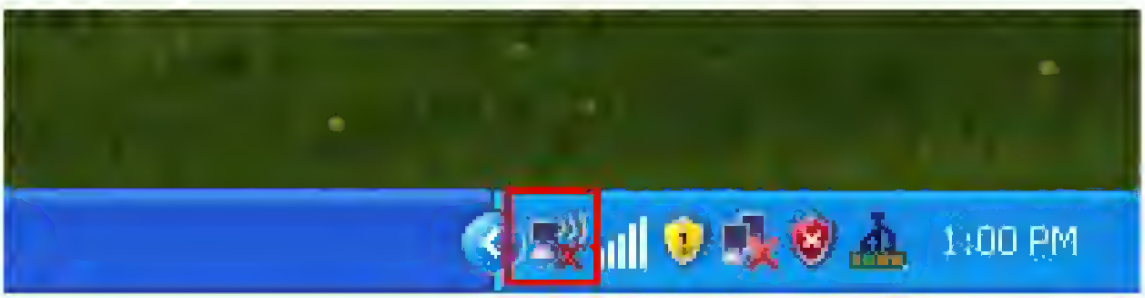
3.1 Windows 2000/XP Configuration

This section describes how to connect your wireless adapter to a wireless network.

Note to Windows XP Users:

You must disable the Wireless Zero Configuration Utility in order to use the bundled Wireless Utility. Please follow the steps below to disable XP's wireless utility.

Double-click on the **Wireless Network Connection Icon** in the system tray and then click on **Properties** or **Advanced**.



When the new wireless network connection properties window appears, go to the **Wireless Networks** tab, uncheck the **"Use Windows to configure my wireless network settings"** check box and click **OK**.

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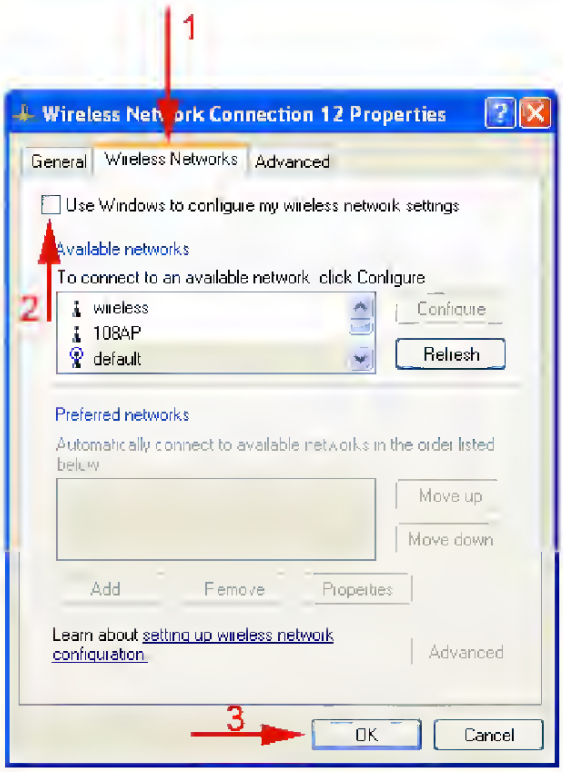

If there is no **Wireless Networks** tab, skip ahead to **Step 1**

Step 1 To open the utility, double click on the Wireless Configuration Utility icon in the system tray at the bottom right-hand corner of your screen.

Step 2 Go to the **Available Network** tab, select the **SSID** (Network Name) of the wireless network you wish to connect to, and click **Add to Profile**.

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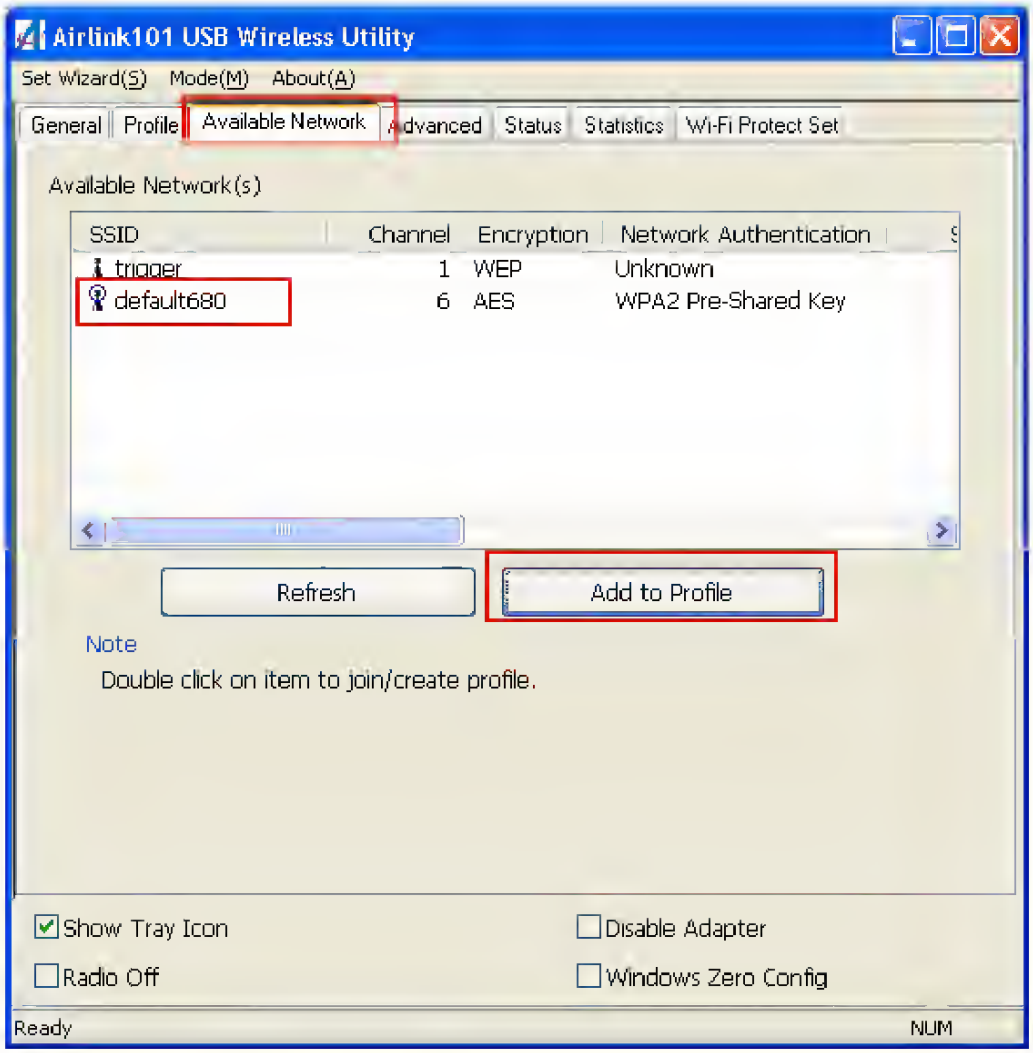

If the network you are attempting to connect to does not have encryption enabled, you will see the following box pop up on your screen:

Unsecured network
You are connecting to the unsecured network
Information sent over this network is not encrypted and might be visible to other people.
OK
Cancel

Click **OK** to connect.

If the network you are attempting to connect to is configured for encryption, the following window will appear:

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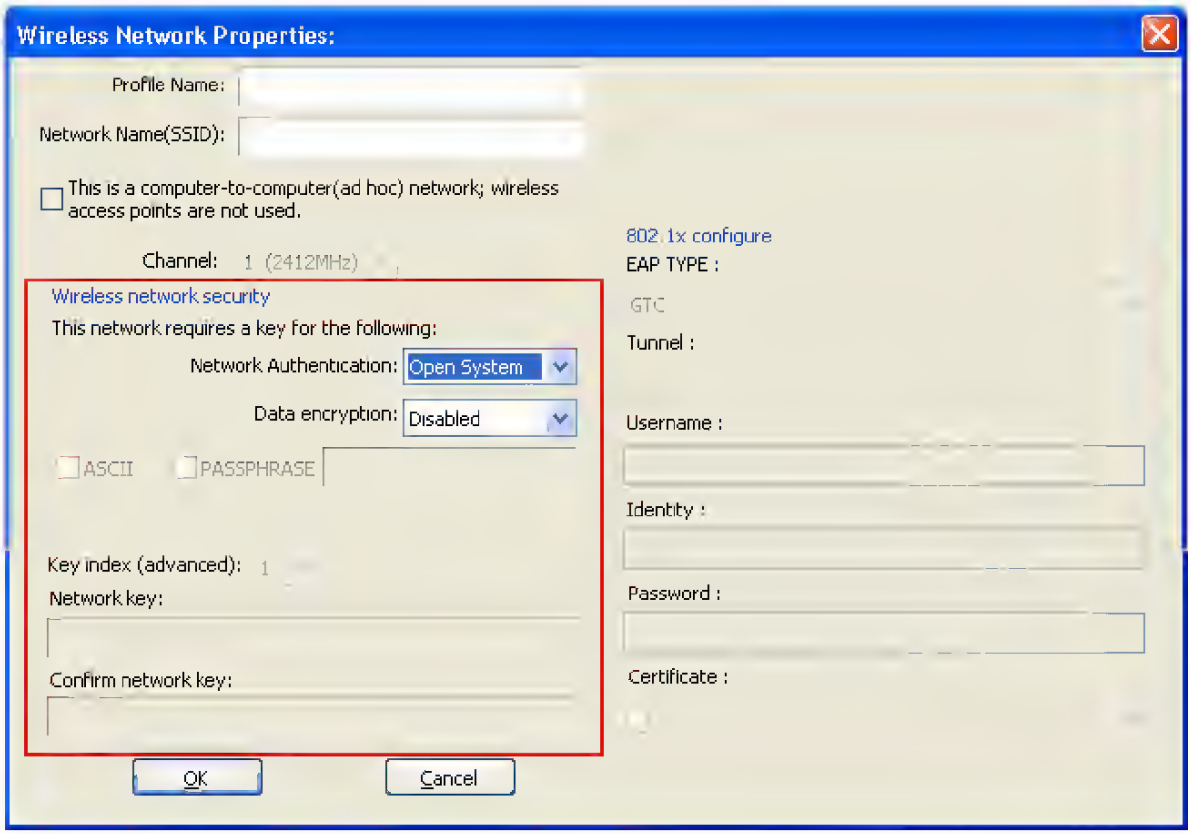

Enter the encryption settings for your router in the appropriate boxes and click **OK** to connect.

Step 3 You should now be connected. Click on the general tab to check the status of your connection. It should say **Associated** next to status, and there should be green bars next to **Signal Strength** and **Link Quality.**

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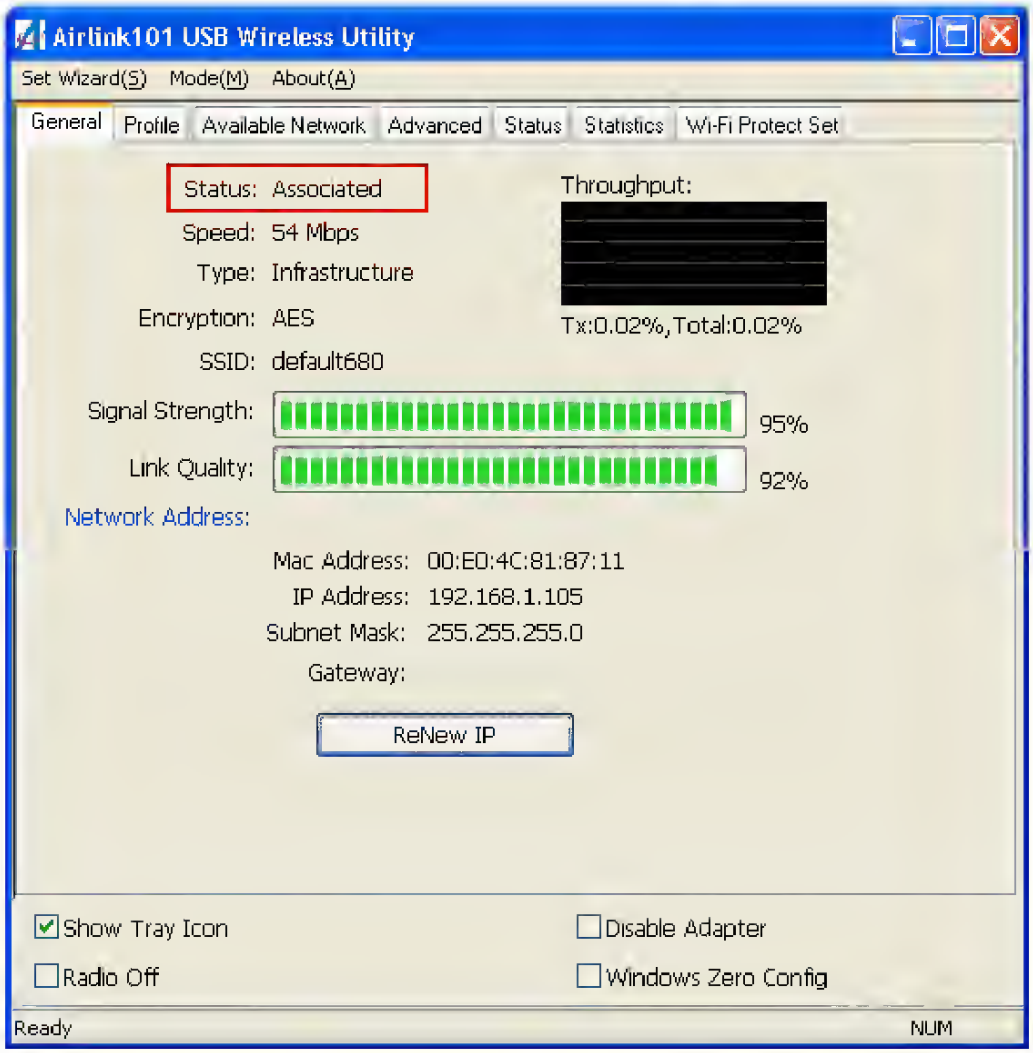

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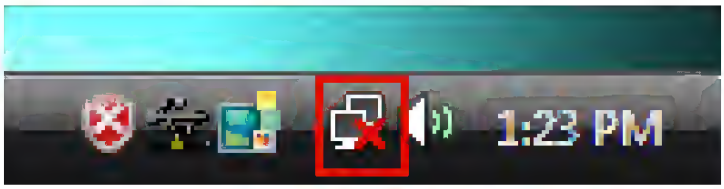
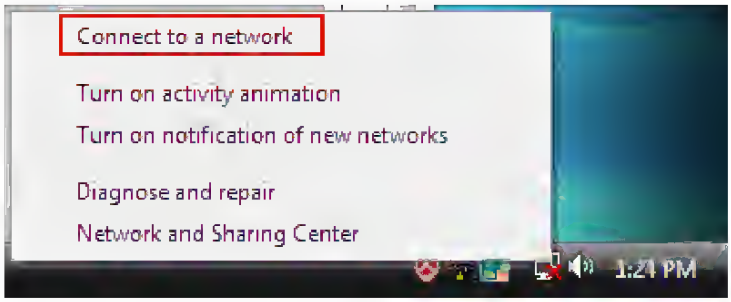
3.2 Windows Vista Configuration

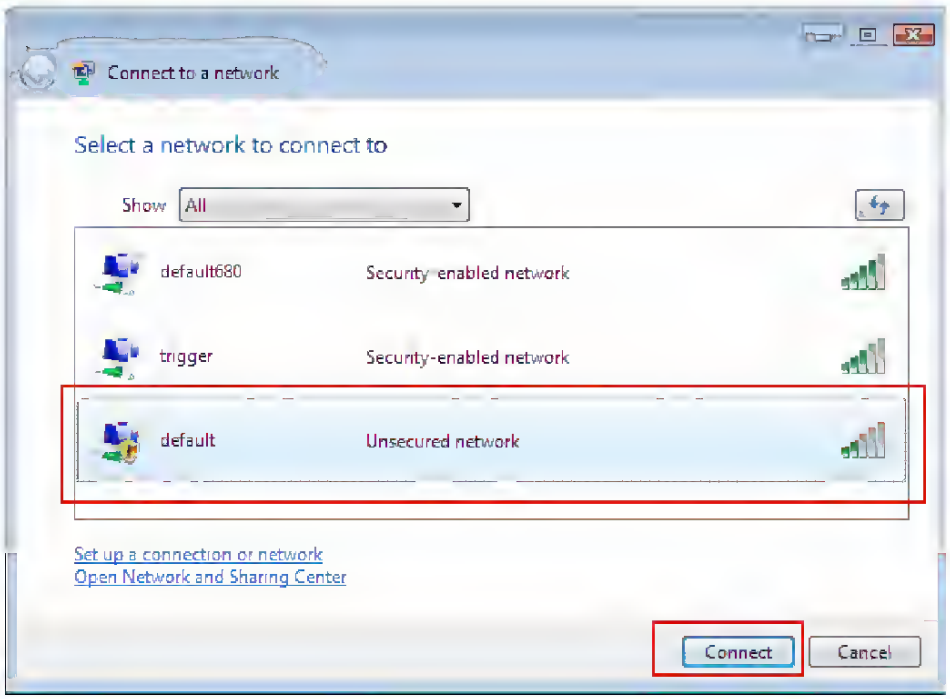
Windows Vista has its own built in utility, so the AirLink101 Wireless Configuration Utility is not used.



To connect to a network using the Windows Vista utility, right click on the networking icon down in the bottom right hand corner. Then click on **Connect to a network**.



Select your network from the list and click **Connect**.



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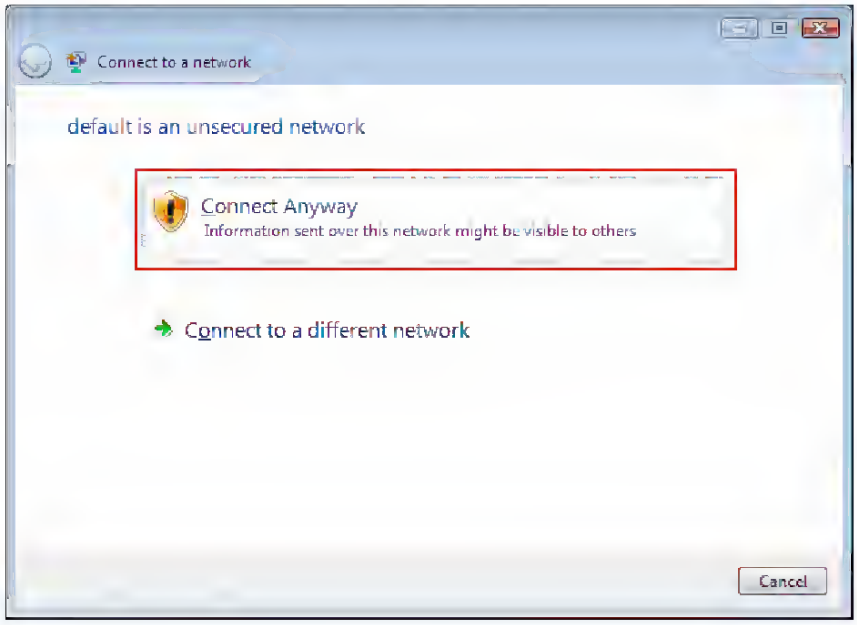
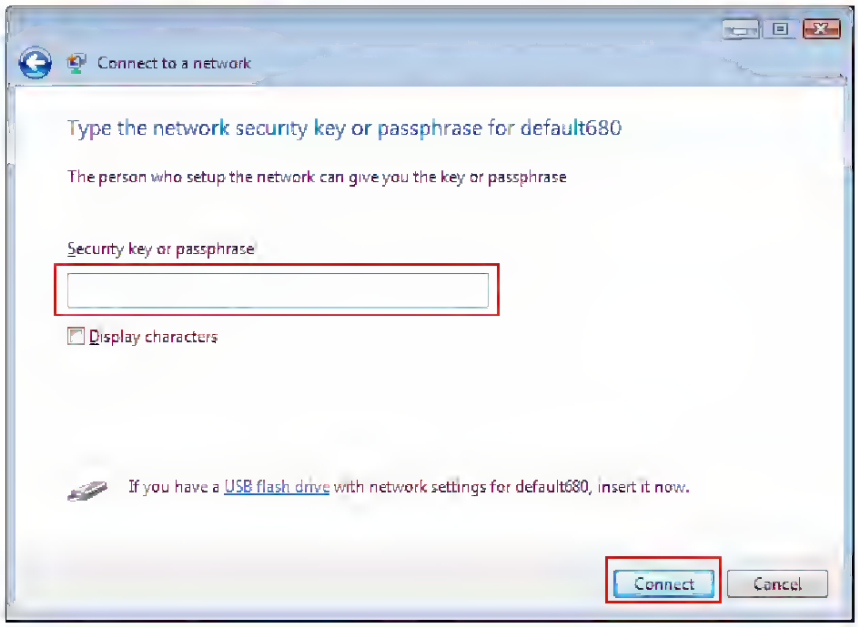
If the network you are connecting to does not have encryption enabled, you will see the following warning:


Connect to a network
default is an unsecured network
Connect Anyway
Information sent over this network might be visible to others
Connect to a different network
Cancel

Click **Connect Anyway** to connect to the network.

If the network you are attempting to connect to has encryption enabled, a box will appear asking you to enter your encryption key.


Connect to a network
Type the network security key or passphrase for default680
The person who setup the network can give you the key or passphrase
Security key or passphrase
Display characters
If you have a USB flash drive with network settings for default680, insert it now.
Connect
Cancel

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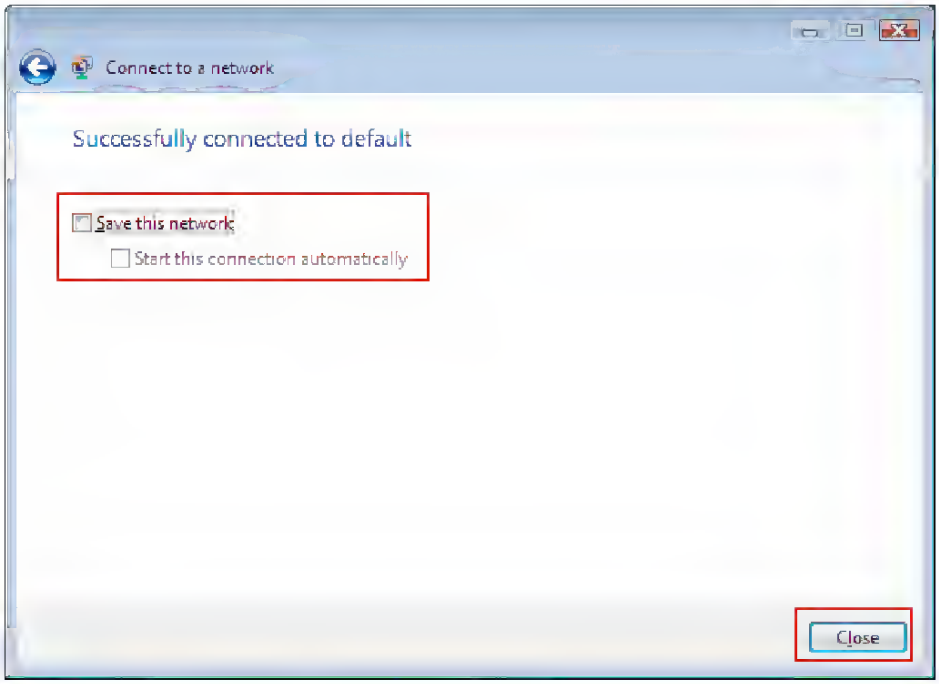
Enter your encryption key into the box and click **Connect** to establish a connection. If you do not know what your encryption key is, contact your router manufacturer for assistance.
You should now be connected to your network.



To save the connection settings so that you don't have to go through the connection setup process each time you start your computer, check the boxes for **Save this network** and **Start this connection automatically**, then click **Close** to complete the setup.

3.3 Troubleshooting

If you are experiencing problems with the connection (unable to connect, low signal strength, slow connection speed, not working, unstable wireless connection) you will want to tune your router's signal by changing channels on the router.

You do not need to change the channel on the adapter, it will automatically pick up the new channel after you reboot the router. The only channel that you need to change is the router's channel.

Your router has 11 different channels to choose from. Start with channel 1 and work your way up. Each time you change the channel on the router, make sure that you

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restart the wireless computer before trying to connect again. Keep going through the channels until you find one that gives you a stable connection.

For instructions on changing channels, refer to the documentation that came with your router.

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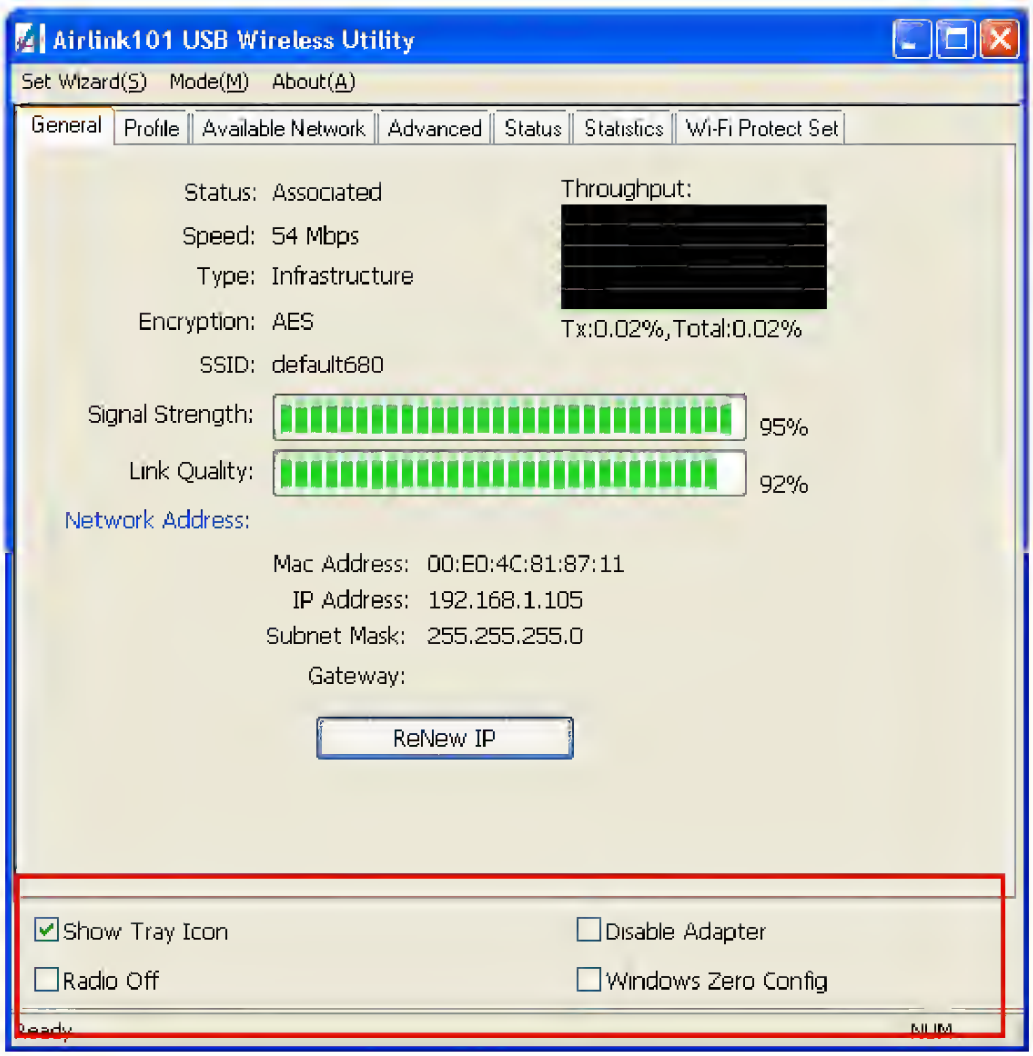
4. Wireless Configuration Utility

This section describes the various functions of the Wireless Configuration Utility that you can configure, including the settings of wireless encryption.

4.1 General

The **General** tab provides you with the status of the current connection, including signal, network name (SSID), IP Address and router channel.



At the bottom you have a few options for controlling the utility and adapter.

Show Tray Icon allows you to show or hide the tray icon for the utility.

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Radio Off disables the wireless function of the adapter.

Disable Adapter will completely disable the wireless adapter.

Wireless Zero Config allows Windows XP users to use the Windows XP Wireless Zero configuration utility instead of using the AirLink101 Wireless configuration utility

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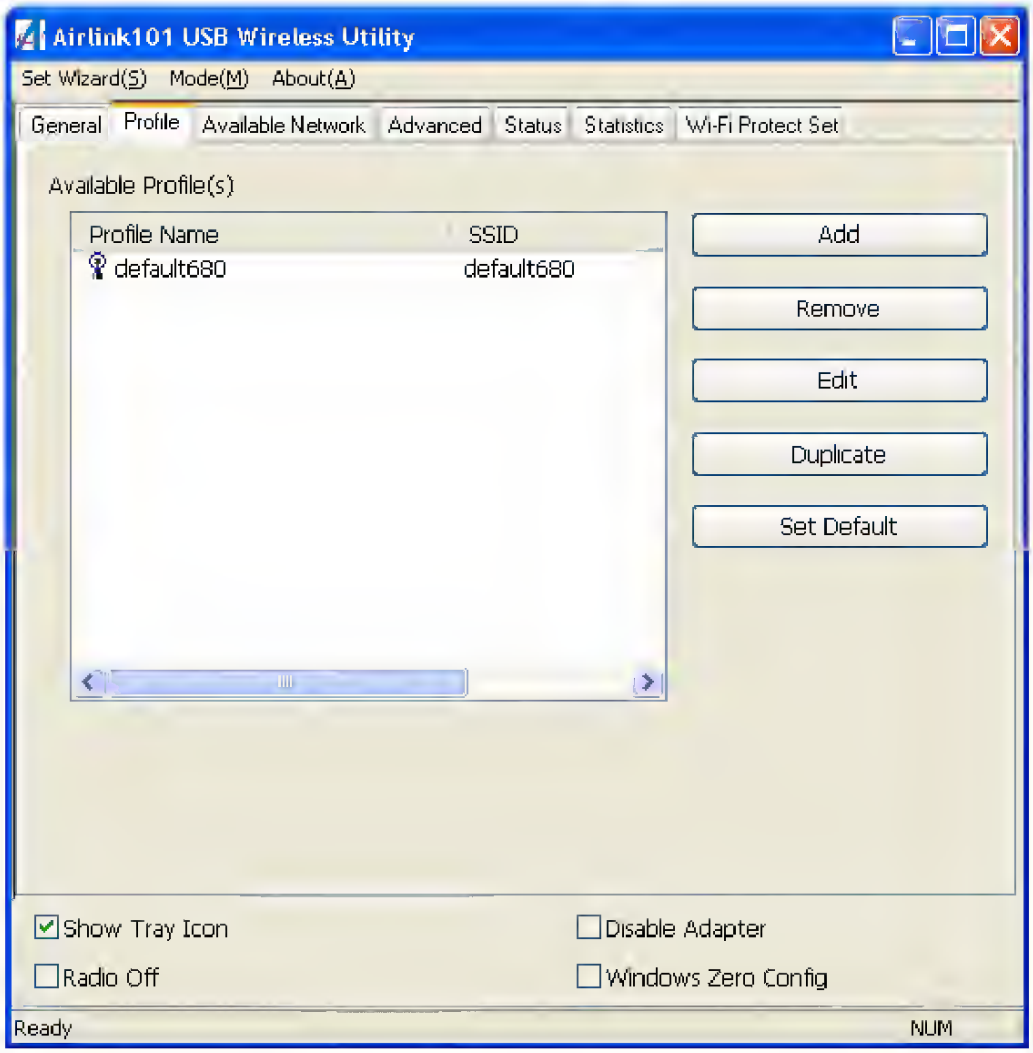
4.2 Profile

The **Profile** tab lists current profiles and allows you to create new profiles.



Click **Add** to create a new profile.

Select a profile and click **Edit** to edit an existing profile.

Select a profile and click **Set Default** to activate a profile.

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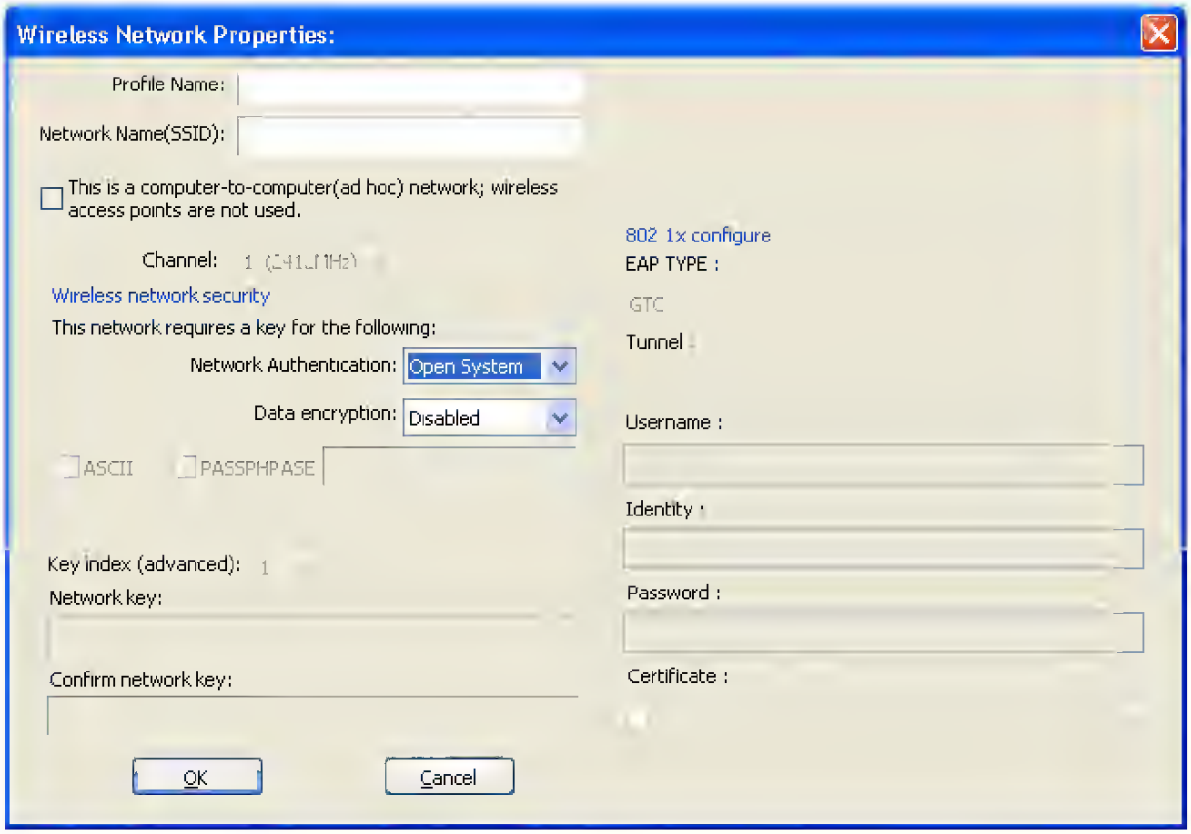

Enter a **Profile Name** and **SSID**. You can also configure your encryption settings for the profile. Click **OK** to save the profile.

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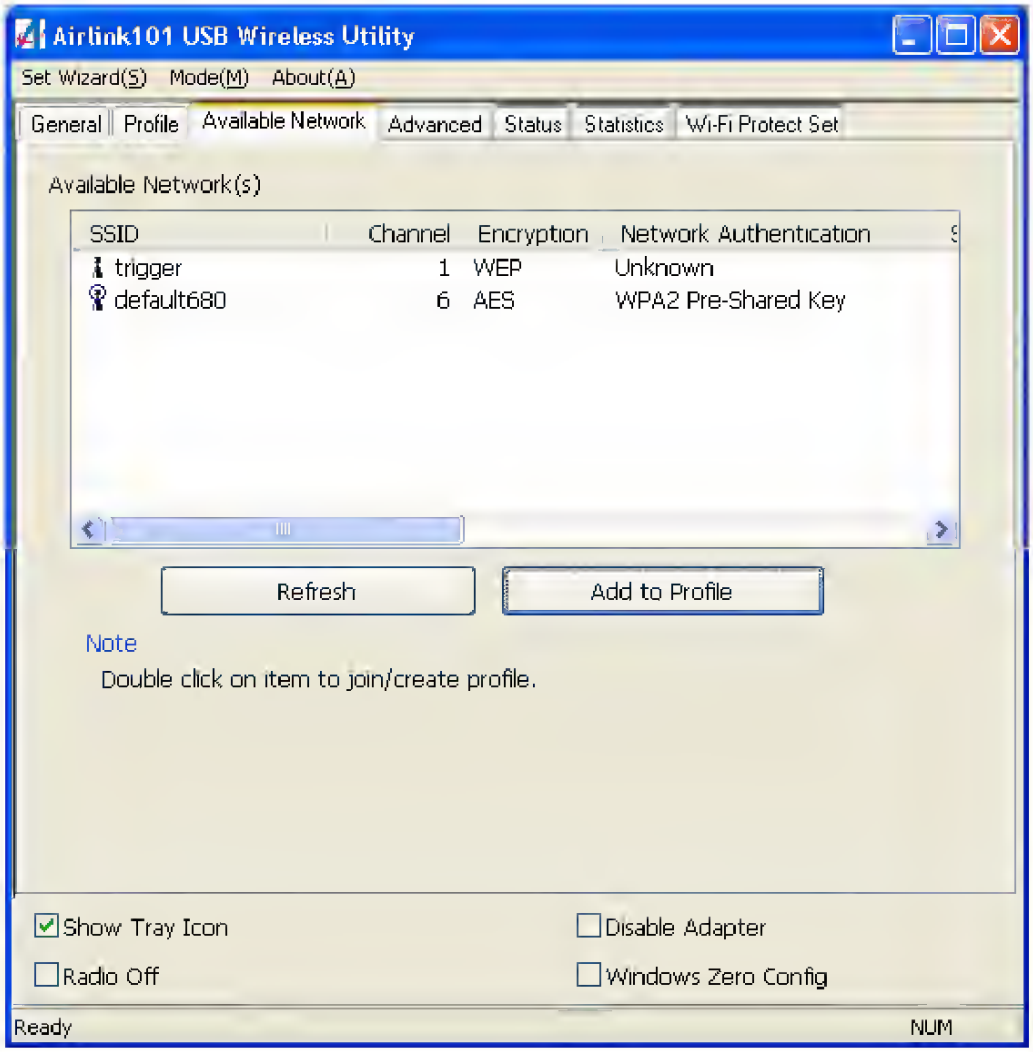
4.3 Available Network



Available network lists all of the networks that the adapter sees in your area. Clicking **Refresh** will refresh the list. To connect to a network, select a network from the list and click **Add to Profile**.

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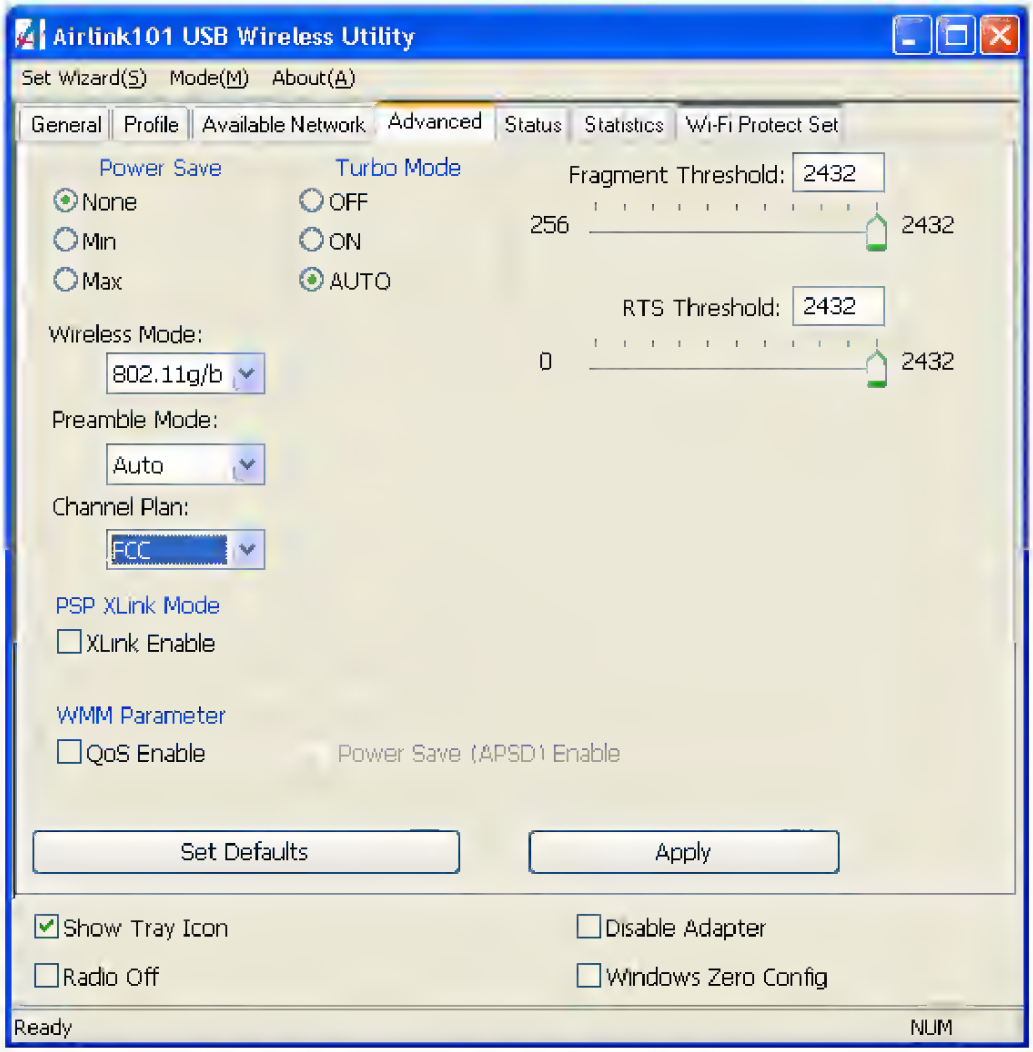
4.4 Advanced



This section contains various advanced wireless settings. These settings are for advanced configuration ONLY. If you do not know what these settings are for, do not change them. Selecting the wrong settings will prevent your adapter from operating properly. If you accidentally change settings, you can click **Set Defaults** to undo your changes.

Power Save allows you to change the power saving function of the adapter. You can choose from None, Min, and Max.

Turbo Mode allows you to set the turbo mode for the adapter. This only works with compatible products. You can choose from OFF, ON, and AUTO.

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Fragment Threshold can be set between 256 and 2432

RTS Threshold can be set between 0 and 2432

Wireless Mode can be set to g/b, g only, or b only.

Preamble Mode allows you to set the preamble for the wireless adapter.

Channel Plan allows you to modify the channel plan for the adapter.

PSP XLink Mode is for use with XLink gaming network and PSP handhelds.

WOL is the wake-on-lan function. You can input a MAC address here to use wake-on-lan.

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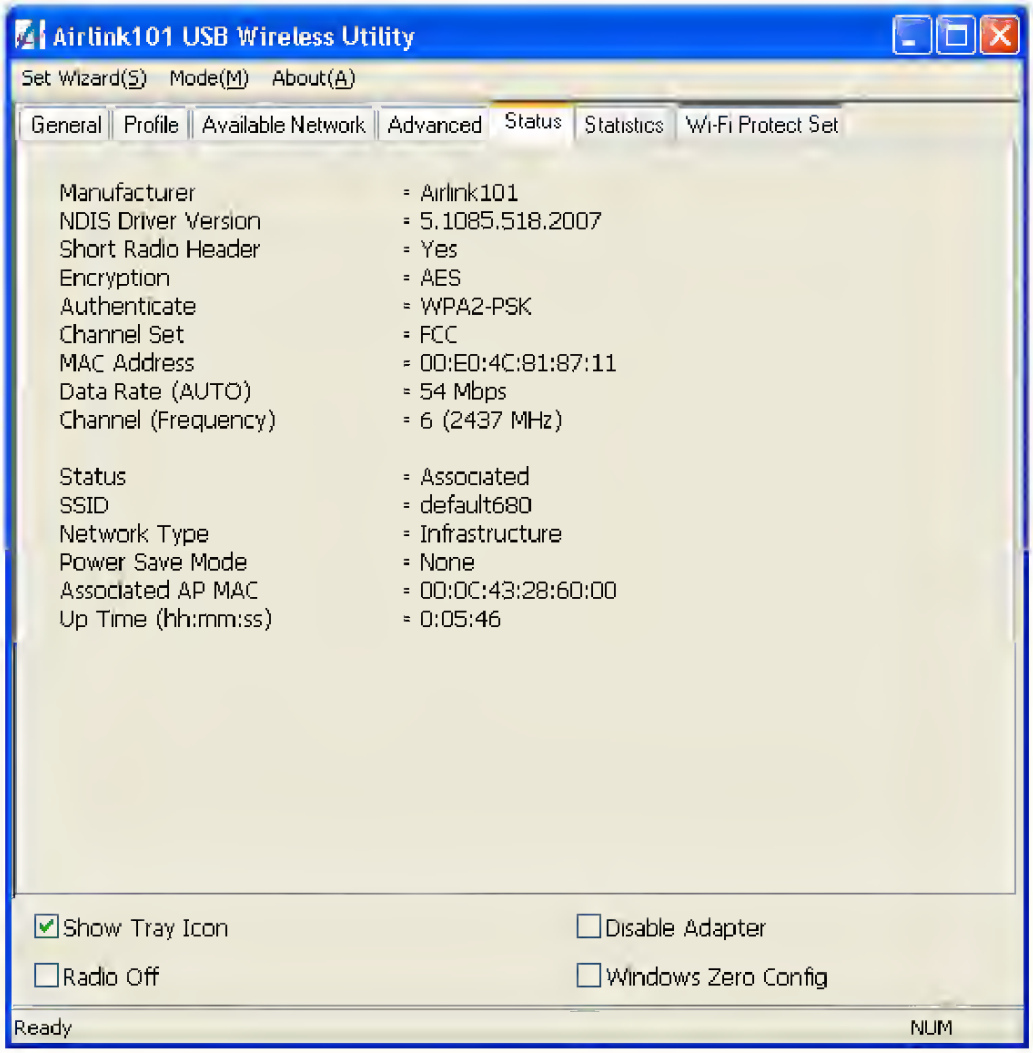
4.5 Status



The status section provides you with a list of information about the current status of the adapter.

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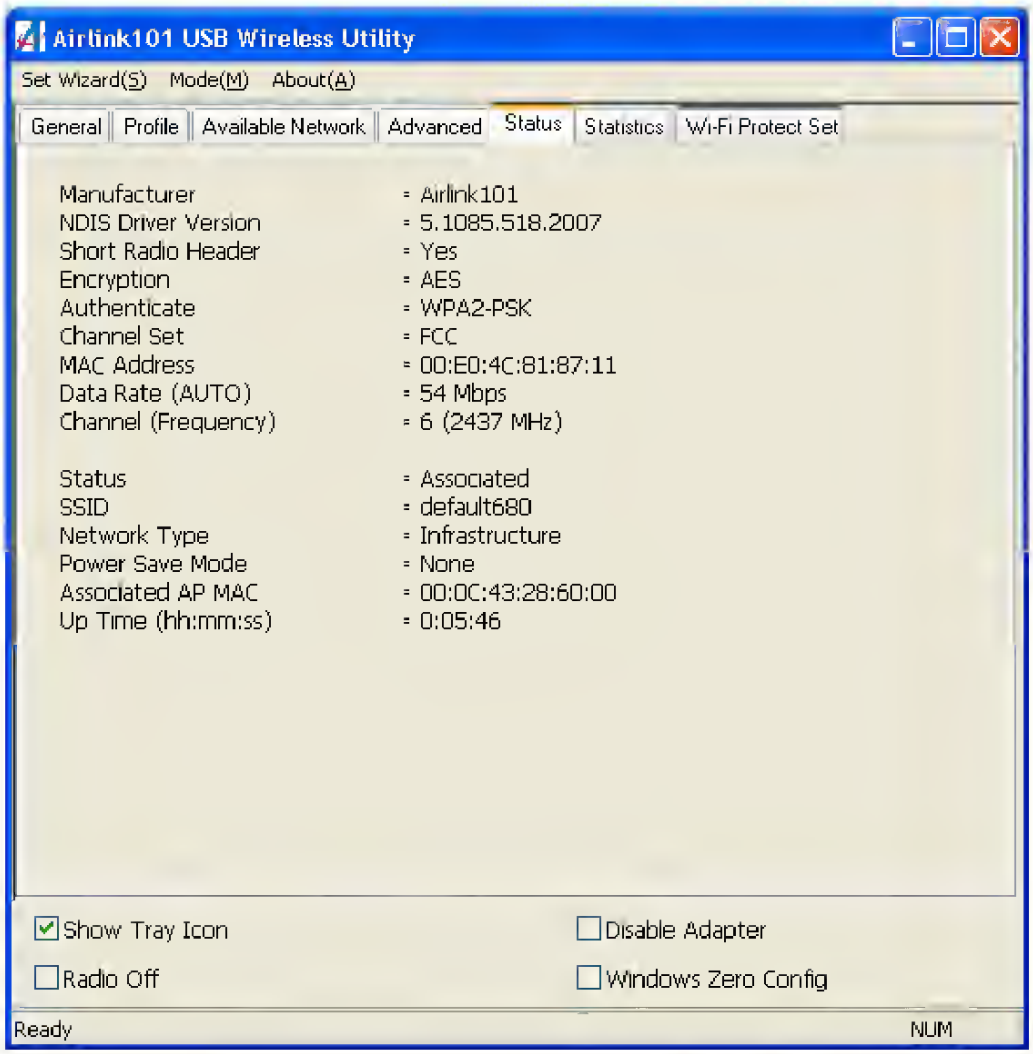
4.6 Statistics



This section provides transmit and receive statistics.

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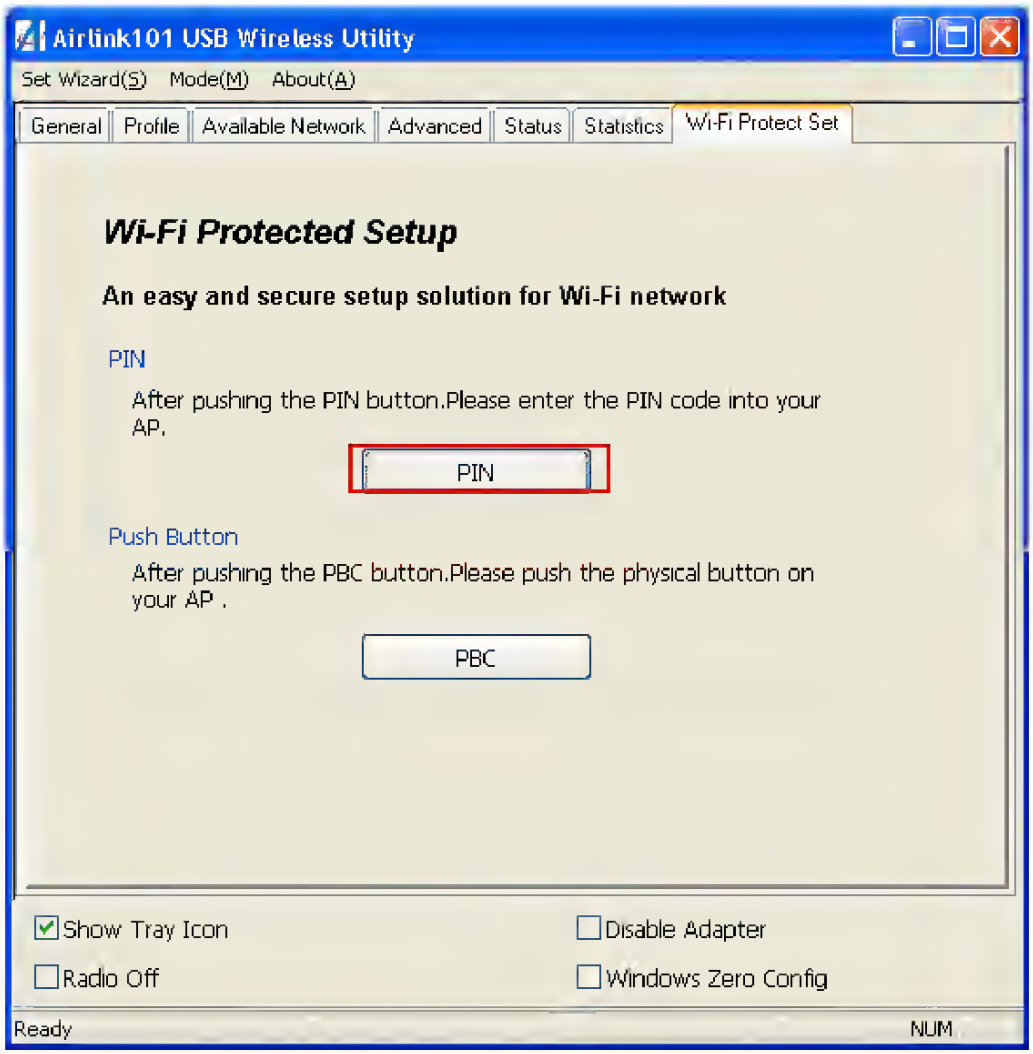
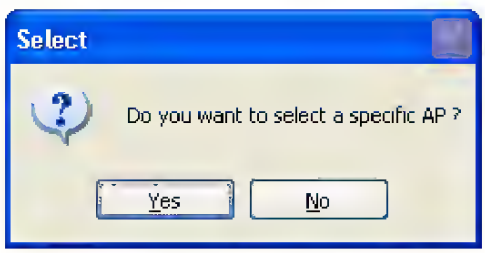
4.7 Wi-Fi Protected Setup

Wi-Fi Protected Setup or **WPS** is a new and convenient way to secure your wireless connection. In order to use it, your wireless router must also support **WPS**. There are two ways to configure **WPS**: **PIN** and **PBC** (Push button method).


Airlink101 USB Wireless Utility
Set Wizard(S) Mode(M) About(A)
General Profile Available Network Advanced Status Statistics Wi-Fi Protect Set
Wi-Fi Protected Setup
An easy and secure setup solution for Wi-Fi network
PIN
After pushing the PIN button.Please enter the PIN code into your AP.
PIN
Push Button
After pushing the PBC button.Please push the physical button on your AP .
PBC
Show Tray Icon
Disable Adapter
Radio Off
Windows Zero Config
Ready
NUM

For the PIN Method, click on **PIN**



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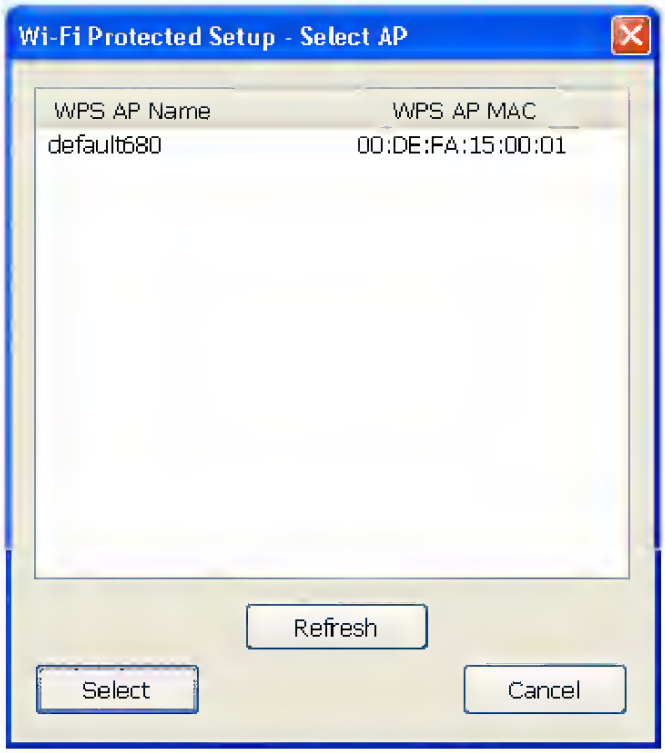
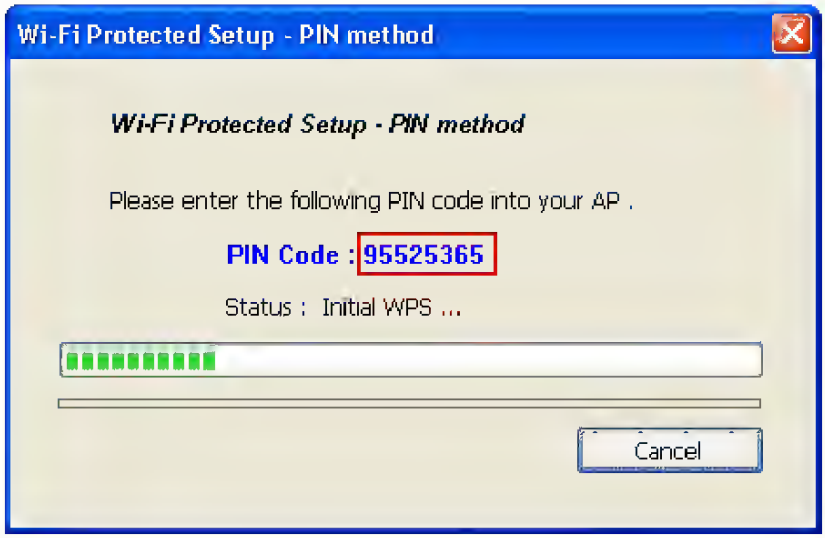
Click **Yes** to select your router from the list.



Then click **Select**


Wi-Fi Protected Setup - PIN method
Wi-Fi Protected Setup - PIN method
Please enter the following PIN code into your AP .
PIN Code : 95525365
Status : Initial WPS ...
Cancel

Write down the PIN Code and enter it into your router.

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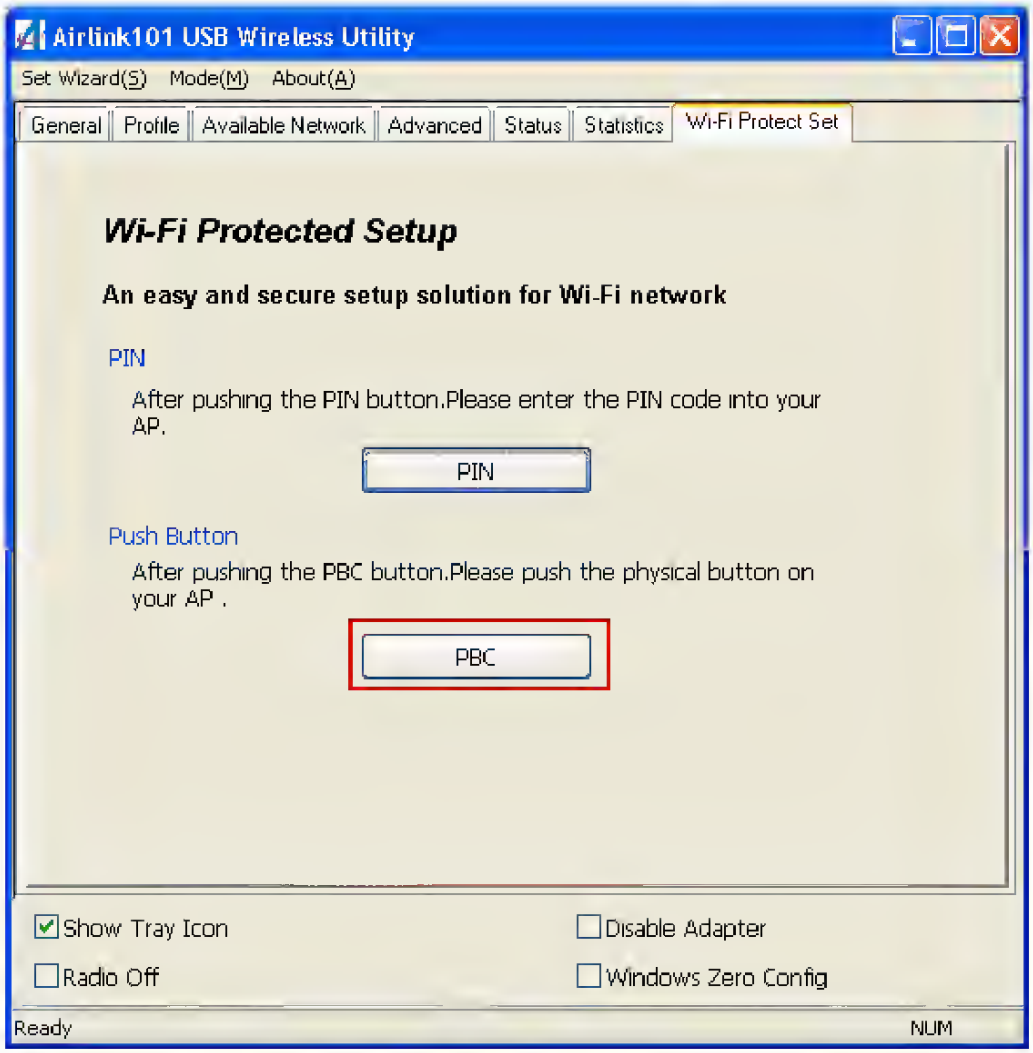
Airlink101 USB Wireless Utility
Set Wizard(S) Mode(M) About(A)
General Profile Available Network Advanced Status Statistics Wi-Fi Protect Set
Wi-Fi Protected Setup
An easy and secure setup solution for Wi-Fi network
PIN
After pushing the PIN button.Please enter the PIN code into your AP.
PIN
Push Button
After pushing the PBC button.Please push the physical button on your AP .
PBC
Show Tray Icon
Disable Adapter
Radio Off
Windows Zero Config
Ready
NUM

For the push button method, click on **PBC**.

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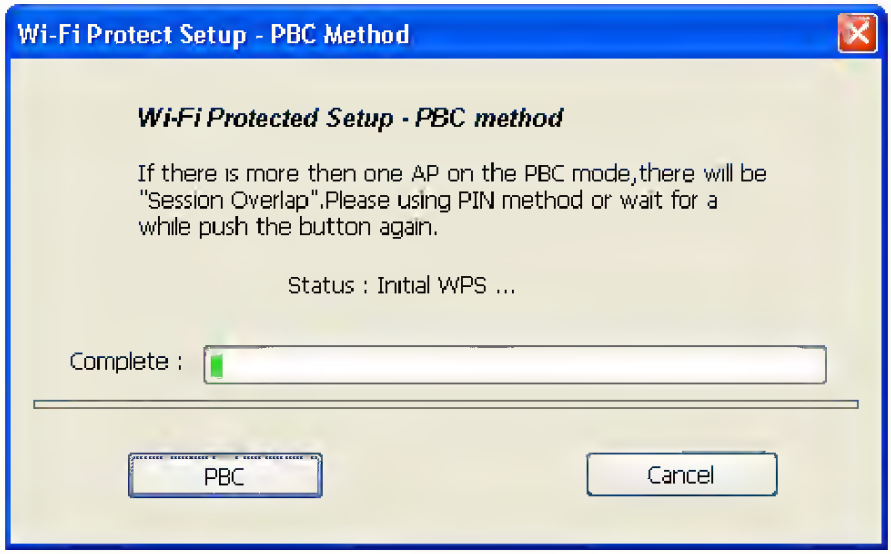
Wi-Fi Protect Setup - PBC Method
Wi-Fi Protected Setup - PBC method
If there is more then one AP on the PBC mode,there will be "Session Overlap",Please using PIN method or wait for a while push the button again.
Status : Initial WPS ...
Complete :
PBC
Cancel

Go to your router and press the **WPS** button to complete the configuration.

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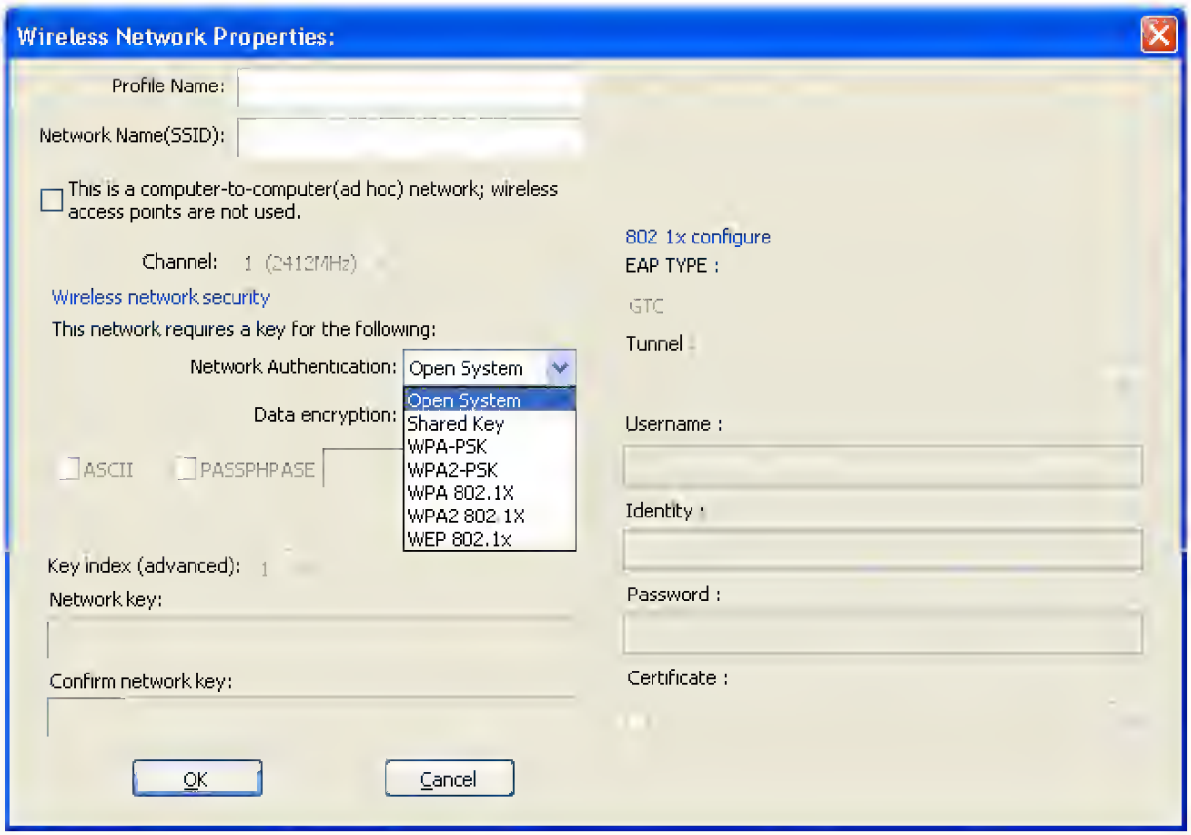
4.8 Configuring Encryption

If a network requires encryption settings to be entered manually, you will see the following box when you attempt to connect:



For **WEP encryption** select **Shared Key** from the Network Authentication box.

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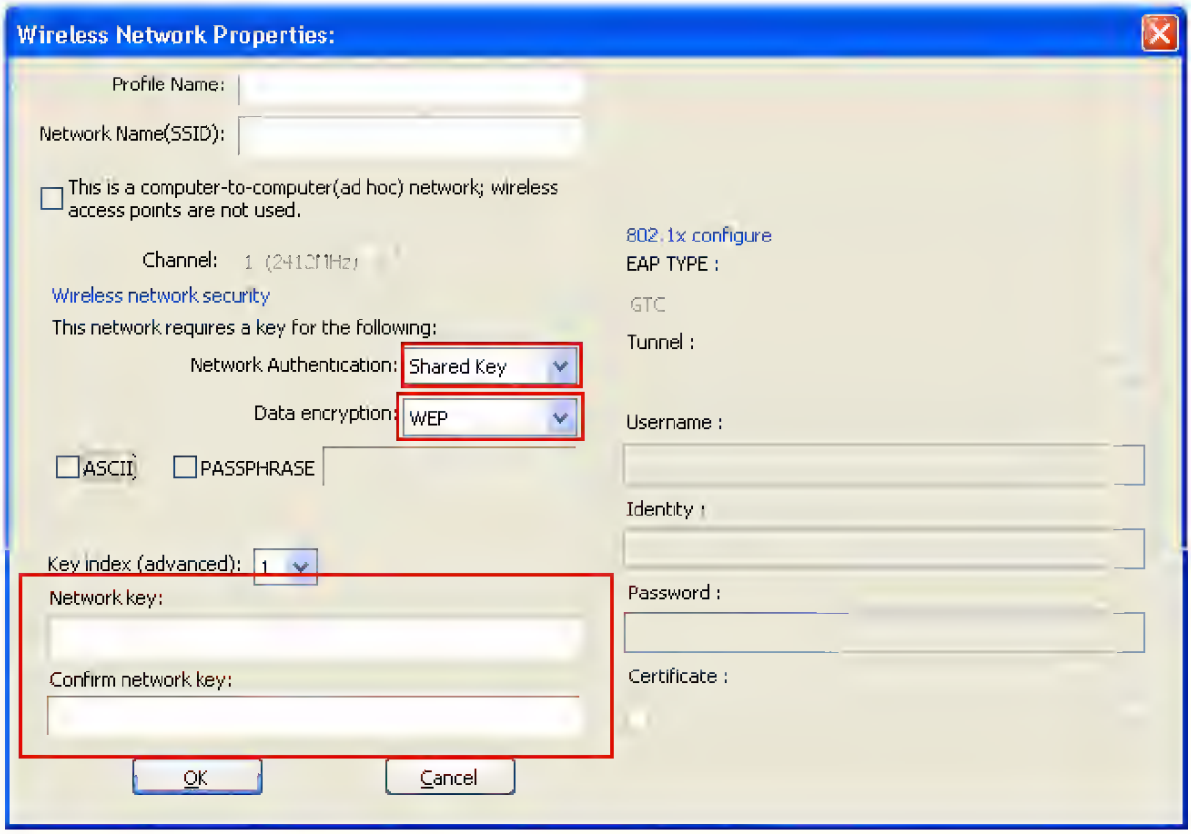

For data encryption select **WEP**

Enter the encryption key in the **Network Key** box and enter it again into the **Confirm network key** box.

Click **OK** to save your settings.

For **WPA encryption** Select **WPA-PSK** from the **Network Authentication** box.

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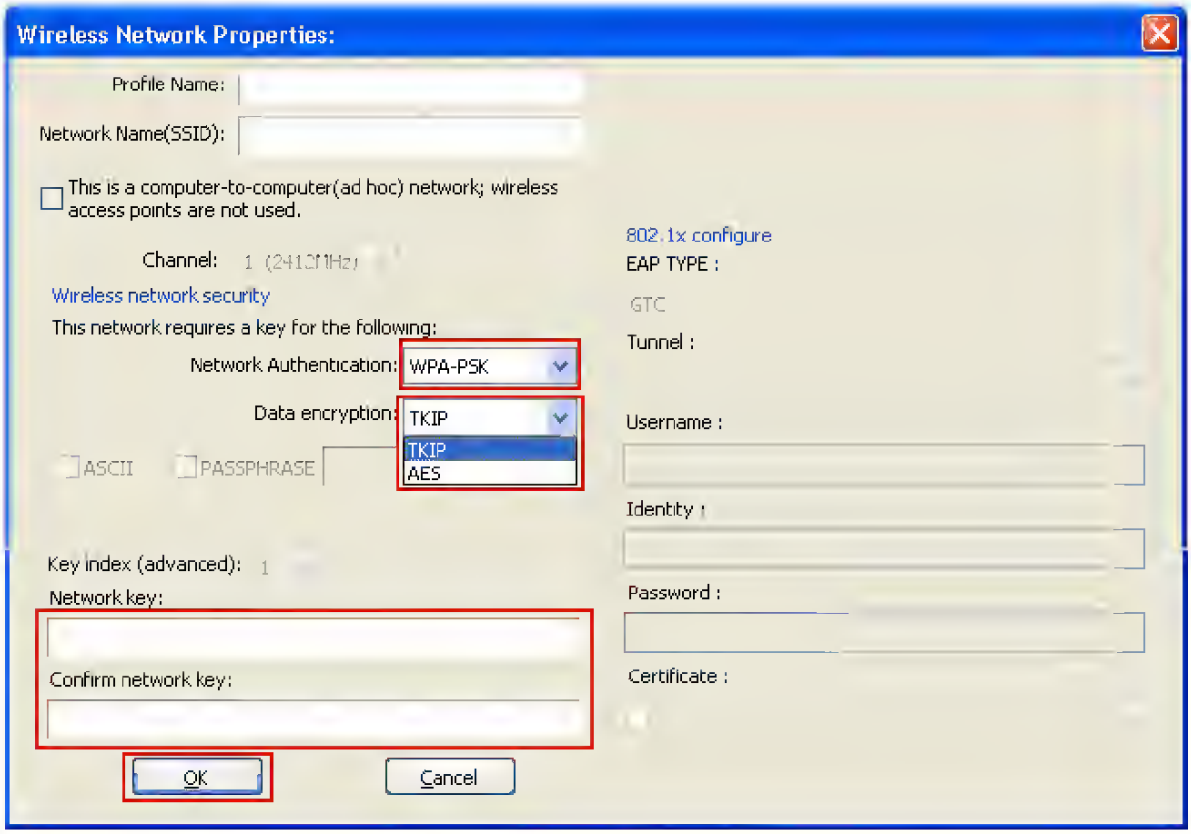

For data encryption select **TKIP** or **AES**

Enter the encryption key in the **Network Key** box and enter it again into the **Confirm network key** box.

Click **OK** to save your settings.

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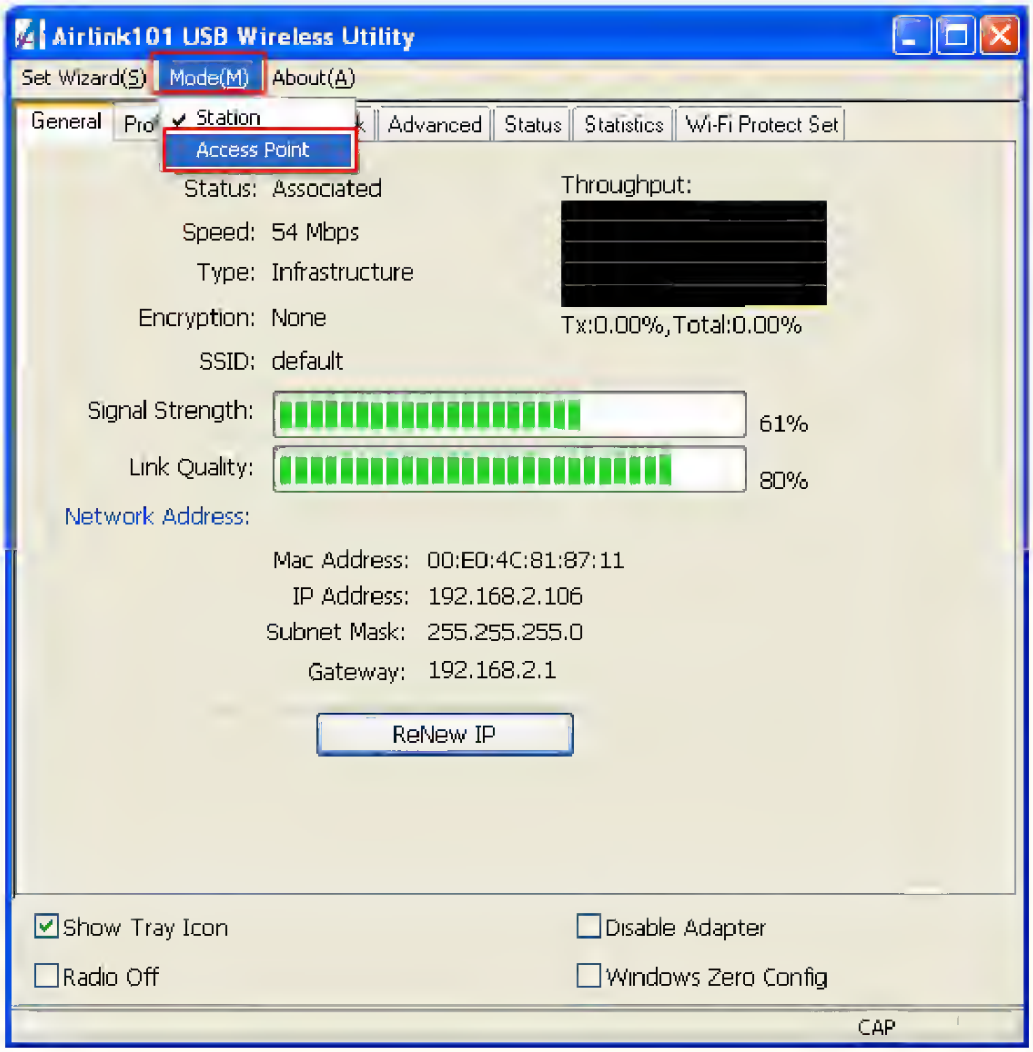
4.9 Access Point Mode

Access point mode allows you to set up your computer to act as a wireless router and share its existing wired connection with other computers. In order to use this mode, the computer will need to be hard wired directly to the internet.

To switch into access point mode click on **Mode** at the top of the utility window and click on **Access Point**.



The system tray icon will change:

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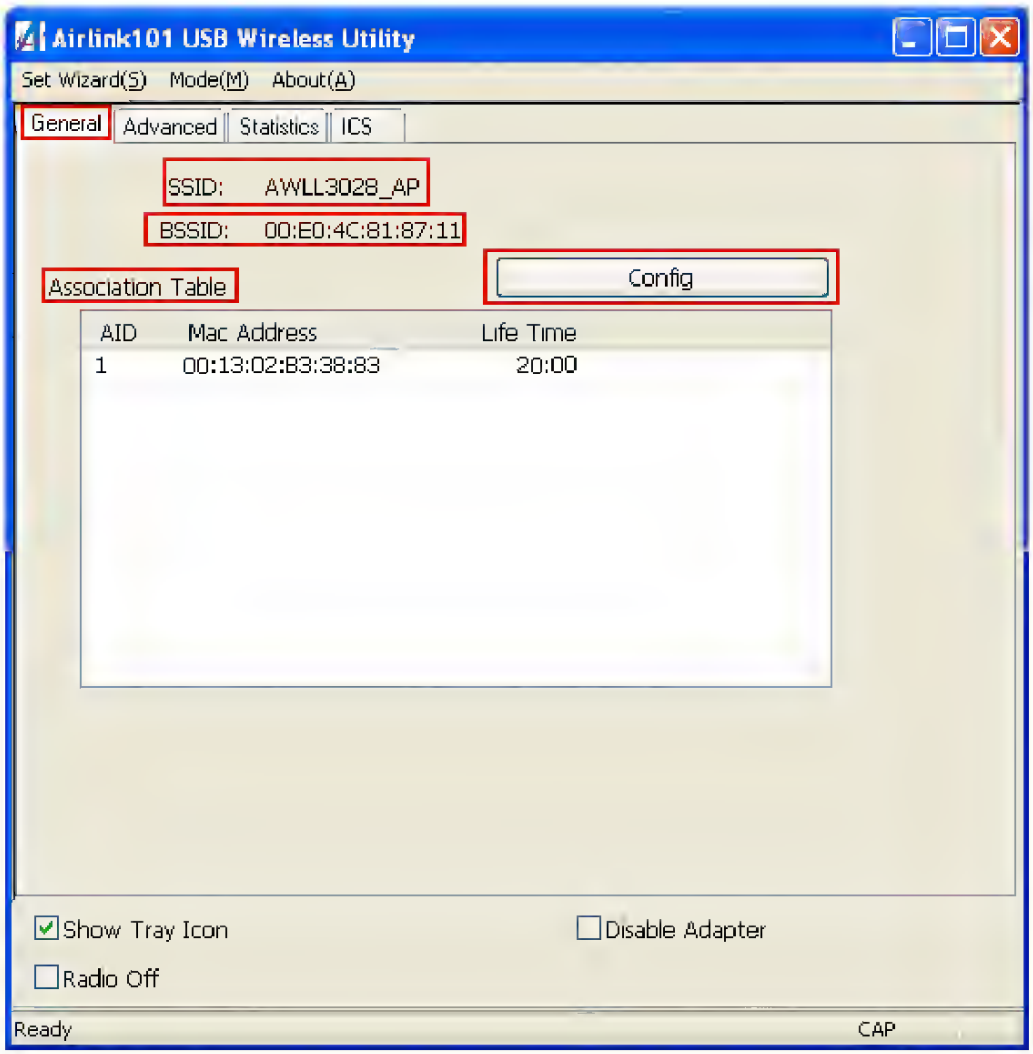
And the interface will change providing you with new options:



SSID displays the current SSID setting of the adapter. The SSID is what other computers will need to look for when trying to connect to your adapter.

BSSID is the physical address or MAC address of your wireless adapter.

Association Table shows you the remote computers that are currently connected to your wireless adapter.

Clicking **Config** will take you to the following menu:

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Here you can set all of the options for your adapter.

Network Name(SSID) this is the name that your wireless adapter will be broadcasting.

Channel allows you to select which channel you want the network to operate on. You may want to change this if you are having connectivity issues.

Wireless Network Security can be set if you want to secure your network. The process is the same as client mode and you can follow the instructions in Section 4.8 to configure the encryption.

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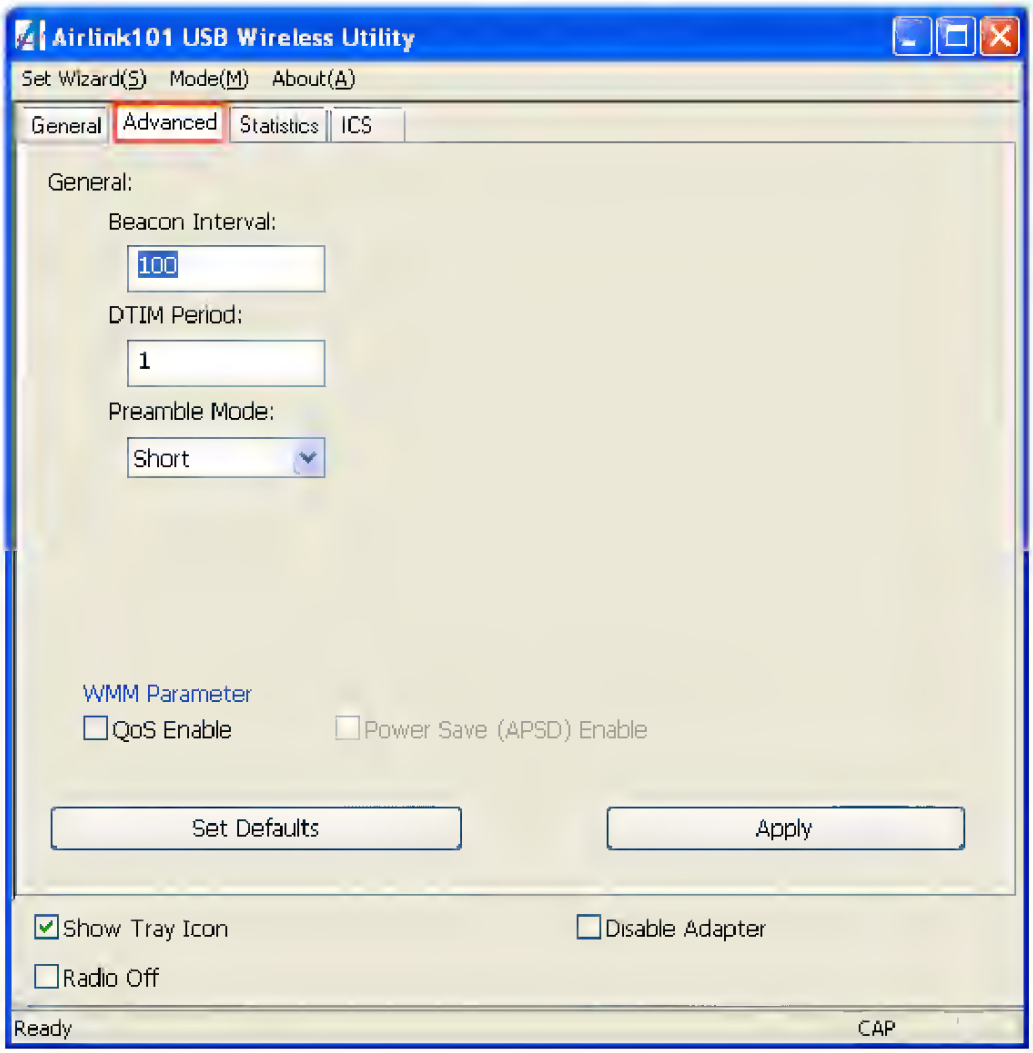
In the **Advanced** tab, you can change settings like **Beacon Interval**, **DTIM Period**, and **Preamble Mode** to fine tune your adapter's connection. Click apply after making changes so that they take effect. If you need to change the settings back to what they were originally, click on **Set Defaults**, then click **Apply**.



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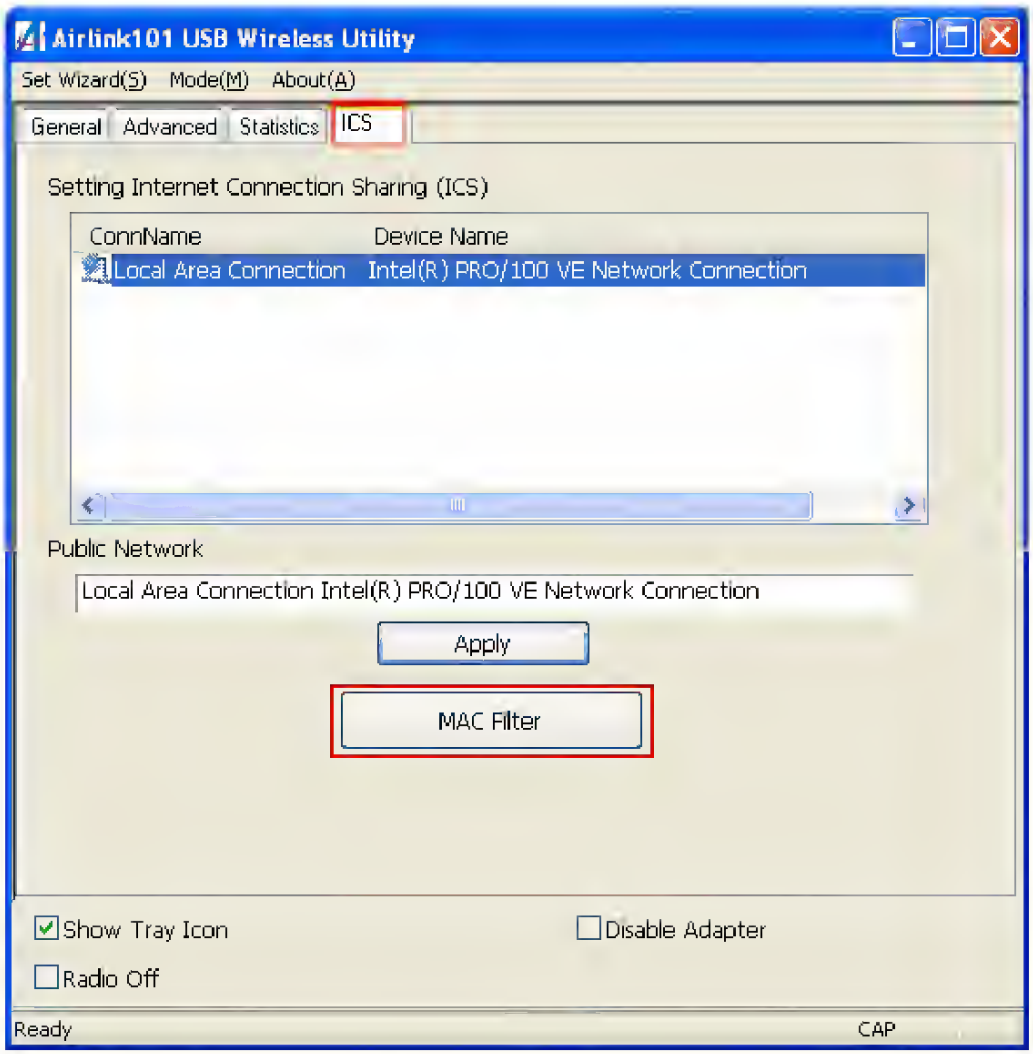
ICS or Internet Connection Sharing shows the device that the adapter is using to provide an internet connection to wireless clients. This is automatically configured during the setup.



To set up MAC Filtering, click on **MAC Filter** and the following screen will appear:

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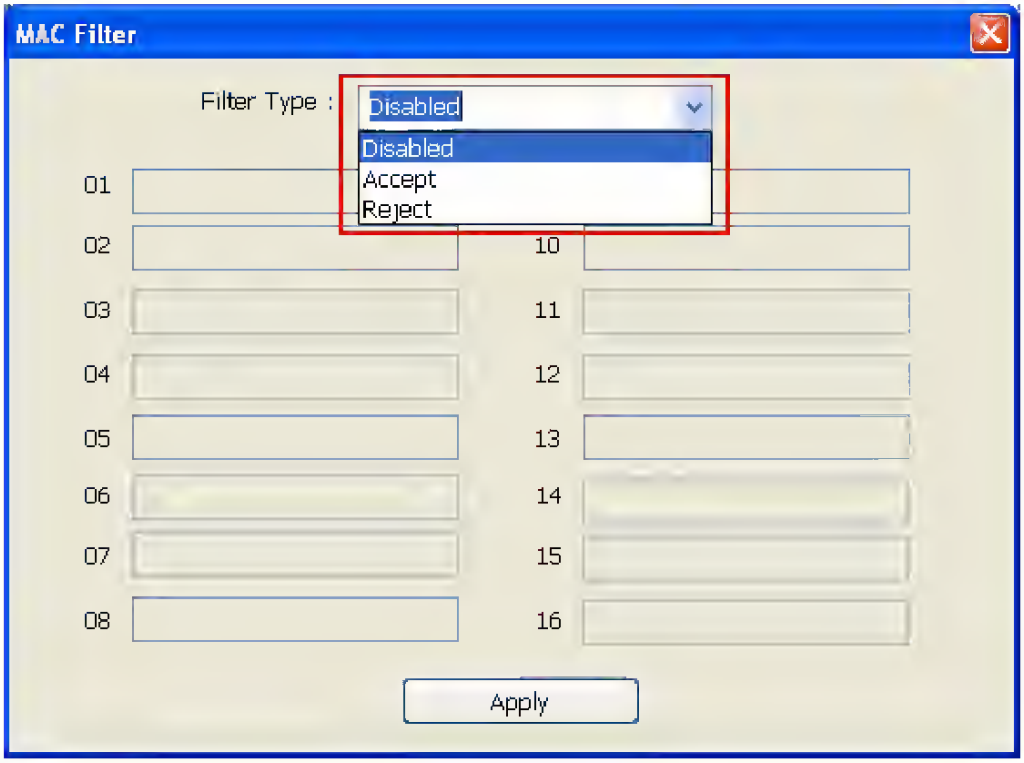

You can choose to **Accept** or **Reject** connections from specified MAC addresses. Once you are done configuring, click **Apply** to save the changes.

4.10 About

The **About** window provides information about the Wireless Configuration Utility version and the current driver version.

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Appendix A – Specifications

Frequency Band
- 2.412 - 2.484 GHz ISM bandwidth

Standards
- IEEE 802.11g
- IEEE 802.11b

Channel
- 11 Channels for US and Canada

Interface
- USB 2.0 Standard, USB 1.1 compatible

Access Mode
- Infrastructure mode
- Ad-hoc mode (802.11b Ad-hoc)

Security
- 64 / 128-bit WEP encryption
- WPA-PSK, WPA2-PSK, WPA, WPA2

Diagnostic LEDs
- Power / Link

Software AP
- Power Saving & WMM support
- WEP / WPA / WPA2
- MAC address filter (WinXP only)
- ICS setting Support (WinXP only)

Transmission Rate
- 1, 2, 5.5, 6, 11, 12, 18, 24, 36, 48, 54Mbps (auto sense)

Transmitted Power
- 16dBm (OFDM)
- 18dBm (CCK)

System requirement
- Windows 2000 / XP / Vista
- Available USB slot

Dimensions
- 69.8 x 22.5 x 8.6 mm (L x W x H)

Weight
- 10g

Environment
- Operating Temp: 0ºC to 55ºC
- Operating Humidity: 10%~80% Non-Condensing

Warranty
- Limited 1-year warranty

Safety Approvals
- FCC and CE

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Appendix B – Information

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:
FCC Radiation Exposure Statement:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

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European Union Notice:

Radio products with the CE marking comply with the R&TTE Directive (1999/5/EC), the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms:

- EN 60950 Product Safety
- EN 300 328 Technical requirement for radio equipment
- EN 301 489-1/-17 General EMC requirements for radio equipment

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Technical Support

E-mail: support@airlink101.com

Toll Free: 1-888-746-3238

Web Site: www.airlink101.com

*Theoretical maximum wireless signal rate based on IEEE standard 802.11g specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, mix of wireless products used, radio frequency interference (e.g., cordless telephones and microwaves) as well as network overhead lower actual data throughput rate. Specifications are subject to change without notice. All products and trademarks are the property of their respective owners. Copyright ©2007 Airlink101®

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